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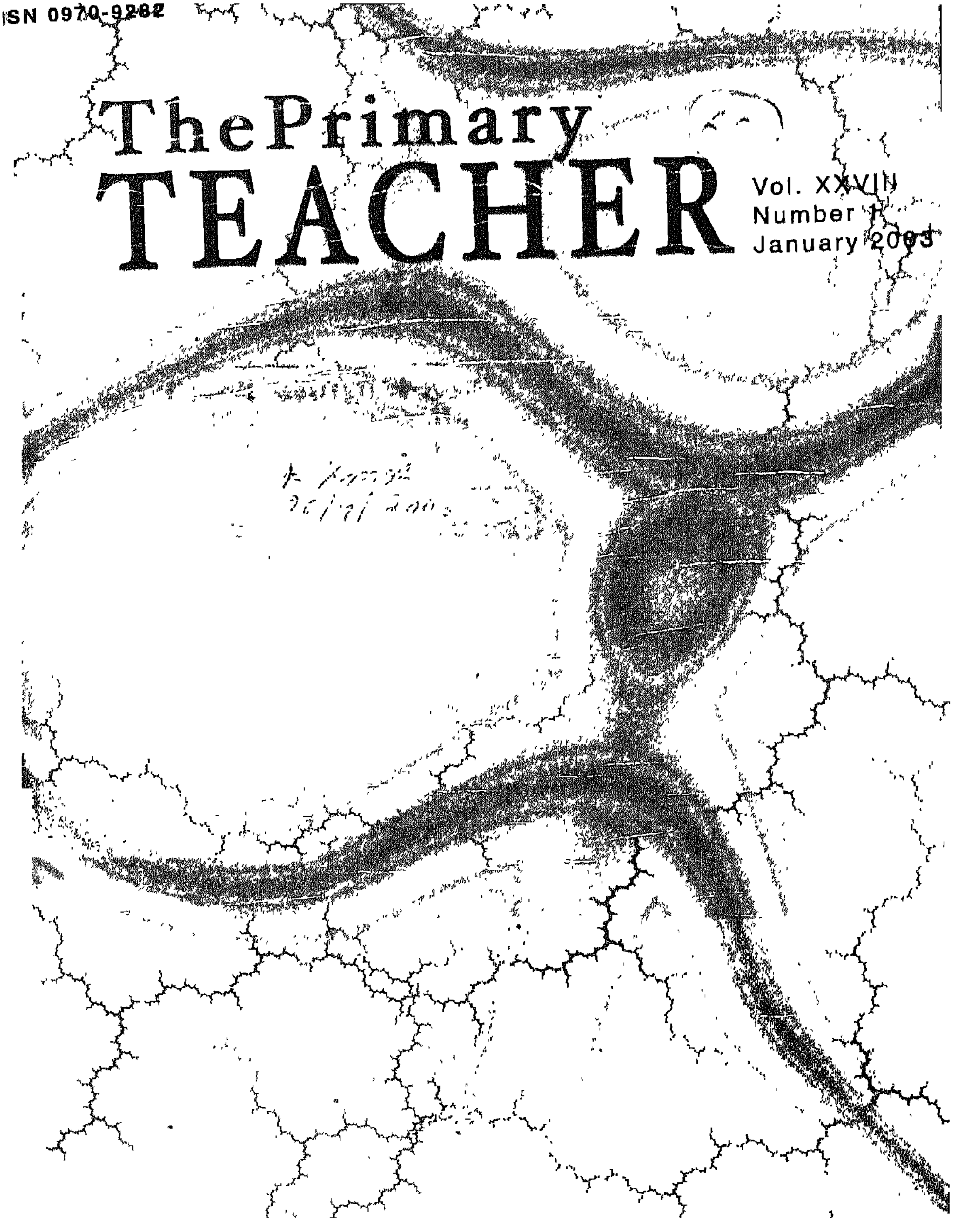

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The Primary Teacher is a quarterly brought out by the National Council of Educational Research and Training (NCERT), New Delhi. The Journal intends to give the practising teachers and concerned administrators, authentic information about the educational policies being decided on and pursued at the central level. It aims at giving the innovative programmes, courses of study, etc. offered at various centres in India from time to time. It also provides a forum for the discussion of contemporary issues in the field of education. The major features of *The Primary Teacher* are:

- Educational policies concerning primary education
- Questions and answers
- States round-up
- Illustrated material for classroom use

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Contribution: Articles and papers written by the school teachers either in English or in Hindi are welcome. Each published article would be paid for. Two typed copies of the articles should be sent in for consideration. Please send your subscriptions to the Chief Business Manager, Publication Department, NCERT, Campus Sri Aurobindo Marg, New Delhi 110016. The opinions expressed in *The Primary Teacher* are those of authors. This Journal merely provides a forum to express themselves, particularly those who have primary education background.

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THE PRIMARY TEACHER

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NCERT

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GANDHIJI'S TALISMAN

"I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test :

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it ? Will it restore him to a control over his own life and destiny ? In other words, will it lead to Swaraj for the hungry and spiritually starving millions ?

Then you will find your doubts and your self melting away."

MKGandhi

Editorial

Scientific temper, inquisitiveness, questioning mind and objectivity are among the major qualities school education aims to evoke among children through science education Science and Mathematics finding a place as compulsory components during the first ten years of school curriculum was a major development towards imparting scientific spirit and values among children. Primary stage of school education has greater responsibility in imparting spirit of enquiry among young children to be progressive Emphasising the need for science education for shaping children with such qualities, the National Curriculum Framework for School Education (NCFSE) 2000 in its the general objectives of education, among others, states,

School curriculum has therefore, to help to generate and promote among the learners:

- Mathematical abilities to develop a logical mind that would help learners perform mathematical operation and apply them in every day life.
- Scientific temper characterised by the spirit of enquiry, problem solving, courage to question and objectivity leading to elimination of obscurantism, superstition and fatalism, while at the same time, sustaining and emphasising the indigenous knowledge ingrained in the Indian tradition.
- Understanding the environment in its totality both natural and social and their interactive processes, the environmental problems and the ways and means to preserve the environment (Page-40)

This issue of the Primary Teacher brings to you papers on variety of topics of interest to teachers, teacher educators and researchers at elementary stage of education. There is however a cluster of four papers on science teaching based on research and innovative experiments Payal Shah describes the 'Science Week' experiment at the Ekalvya School to stimulate interest and instill curiosity among young children. K S Rama's research on the effectiveness of play-way technique in teaching science reveals the usefulness of the strategy and V.P Gupta's paper on the ways to learn chemical formulae and to identify mistakes in Chemistry would be of use for teachers and students to break the hard spots in learning Chemistry. The development of mathematical thinking in children as explored by A C. Pachuary demonstrates the various stages in the development of mathematical thinking One of the major conclusions of the study is that there is no gender difference in the mathematical thinking among school children

Other topics of the issue include, analysis of research in teacher education, in-service teacher education and burnout tendency of female primary teachers. Purnima, in her study on the burnout tendency of female teachers, explores the typical problem faced by female teachers. The study indicates that schools need to provide conducive atmosphere and facilities for them to ward off the burnout tendency among them Kiran Soni Gupta suggests ways to produce skilled manpower to tackle the problem of growing unemployment for which, the author views that elementary education also needs to impart vocational skills. S.K Yadav, in his analysis of the research perspectives in teacher education, expresses concern over the quality of research in teacher education and poor dissemination of research findings. Easwari's experiment with the 'reformed pupil location' gives clues to keep the entire class as 'action zone' and all children involved in the activities of the class. The study by Ponnusamy and Natesan on the use of instructional media by primary school teachers calls for orientation of teachers in the use of media in classroom. The trialing exercise with teaching aids and interactive methods to find out the future expectations of primary teachers conducted by G.D Singh, Durga Rai and L. Kishore and the experiment with role play are illustrative examples of effective and participatory orientation programmes

We sincerely hope this issue would be of benefit to our readers

R. Meganathan
Academic Editor

Fun with Science Week

An Innovative Experiment

Payal Shah
Educator
Eklavya School, Ahmedabad

Imbibing scientific attitude and instilling questioning spirit are prime among the aims of education. Schools play a very important role in shaping students with these skills This unique experiment by the Eklavya School would set a model for others to follow in imbibing these skills among young children

Introduction

Eklavya School, Ahmedabad provides all round development opportunity to each child. The school, through a unique methodology provides exposure to various teaching-learning materials and creates an environment conducive for real learning

Researches have proved that children learn best from the environment, especially one that caters to 'learning by doing' Part of this effort was to celebrate a "Fun with Science Week" in school.

Usually the science week starts or ends with Edison's birthday, which is on 11th February. The world has had a number of great scientists and inventors but Edison was rare. Eklavya chose this day since Edison's life is an example to any would-be inventor. The legendary career of the inventor Thomas Alva Edison illustrates how creativity can be cultivated by anyone, in any industry. His work methods reveal that the true keys to unlocking creativity are learned traits-namely perseverance and an open-minded approach to learning. Edison was granted 1,093 patents for inventions ranging from the light bulb and electric pen to the phonogrash, motion picture camera and alkaline storage battery. He also invented a talking doll and a concrete house that could be built from a cast iron mould in one day. He looked at creativity as simply good, honest, hard work. Edison believed that to discover one good idea, you had to generate many. The wild enthusiasm with which he approached an idea and his ability to try out anything out of the ordinary, inspired him to consistently challenge assumptions. Edison said and believed- *A Genius is 1% inspiration and 99% perspiration!'*

Objectives

The main objectives of the Science Week are as follows.

- To develop an understanding of science and make its study fun and interesting
- To relate science and scientific facts with day-to-day activities of life
- To motivate students to become inventors so that they begin to see themselves as one.
- To experiment through crazy ideas, using imagination to arrive at scientific conclusions.

Preparations

The Committee started working a month ahead to prepare for the 'Fun with Science Week'. The school was decorated for the week with pictures of scientists and cut outs of laboratory materials like test tubes, bulbs, magnets (bar, horse shoe) etc. The art and craft teachers helped here.

For each school a special committee of 4 Educators was constituted and assigned the responsibility of planning the day-to day activities for the week and making necessary arrangements. Other educators were asked to volunteer and give help when required. The committee members brain stormed on the activities and experiments to be performed, sat with science books and discussed the various activities.

The preparations were done keeping in mind the objectives of such a celebration and with the aim that students enjoy and learn from the various activities organized.

In the three days of science week all the Science, Art and Craft periods and Assembly time was put aside for the celebration of 'Fun with Science Week'. A rough time table was designed. This time table clearly mentioned as to what would be done in the assembly, science periods and art and craft periods for all the three days.

Science was incorporated into the study of English, Hindi, History, Geography and Maths by choosing such lessons of the syllabus, which were related to Science.

'Fun with Science Week' was separately celebrated in the Eklavya Junior School (Classes 1 to 4) and Eklavya Middle School (Classes 5 to 8).

The report is divided into two parts. The first port shows details about celebration of the Fun with Science Week in Eklavya Junior School and the second part shows details about Eklavya Middle School.

'Fun with Science Week' in the Junior School

Assembly Celebration

A school's day starts with the morning assembly. It was decided to make the best use of this by starting the celebrations during the assembly. Each day's assembly was planned and celebrated in a different and unique way.

First Day

The week started with a drama during the assembly. Educators enacted scenes from day to day life, which answered the many questions children ponder over, like why does a ball bounce back? why do we fall backwards after we collide with each other? Educators played the role of school going children and the situations were given a humorous twist to interest the children. Two educators who acted as children played with the ball and while playing with it when the ball bounced back, they became curious to know the reason behind it. To satisfy their curiosity they went to Mr Fundoo Uncle. They became curious to know the reason behind it. The absent-minded scientist who was always busy in his smoke filled lab, came and attempted to answer their queries. He also gave scientific reasons for his answers to the children's queries.

Second Day

A 'Magic Show' was arranged. An experiment of 'burning stones' was demonstrated. A matchstick was lit over a pile of stones which the children were sure would not burn. Then some water was poured over the pile of stones and again a matchstick was lit and brought near it. Children were amazed to see the stones caught fire. More and more water was poured and the stones burned and smoke was produced. The stones were actually Calcium carbide and produced Acetylene gas when water was poured on it. Acetylene is an unsaturated hydrocarbon and burns with a sooty flame. Hence there was smoke.

Educators performed a drama depicting the polarity of magnets and its effects. Two educators enacted the role of a magnet, brother and sister. The story of long lost siblings meeting in a Hindi film style and trying to embrace each other unsuccessfully made the children laugh a lot. Children were asked to find out the reason for this unsuccessful meeting.

Third day

The third and the last day of the week was a 'Competition Day'. The students from all the classes-1 to 4 performed simple experiments.

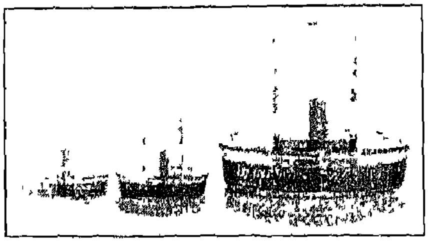
Little Children from classes 1 and 2 came up with confidence, performed amazing simple science experiments, and presented them along with the relevant scientific explanation.

Children from classes 3 and 4 presented varieties of experiments during the assembly. They gave a detailed and clear scientific reasoning behind the happenings, of their experiments.

One of the visitors who saw children performing the experiments commented *"The children were very excited and* *curious While performing the experiments they were very confident and felt proud of their achievements"*

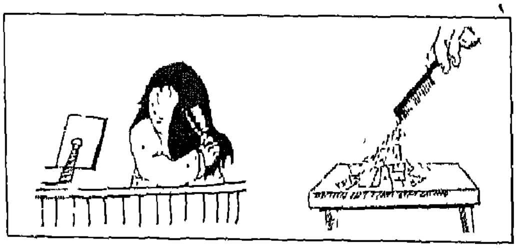
Experiments by Class 1

1 Take a candle. Light it Invert a glass on the candle. The candle extinguishes after a few seconds.



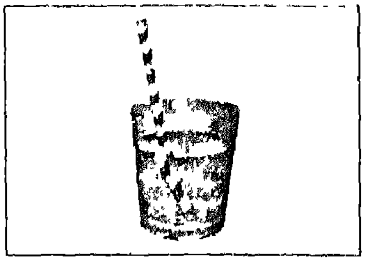
2 Take a stick Hang two balloons filled with air on each end. Prick one of the balloons with a pin to break it The stick now tilts such that the filled end balloon being heavier moves down and the other moves up.

3 A comb was rubbed on unoiled hair and brought near tiny bits of paper The pieces of paper stick to the comb demonstrating static electricity ·

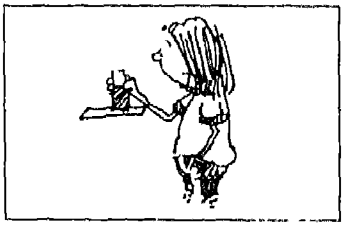


Experiments by class 2

1 Why does a pencil dipped in water appear bent? Light passes from a rarer to denser medium and undergoes refraction-bending



2 A glass was filled with water and covered with a paper at its mouth The glass was inverted and the hand taken away. The water from the glass did not fall down



Experiments by class 3

1a. A bottle was taken and three holes were made on the bottle's surface at three different levels When water was filled in the bottle, the water spilled out of the three holes of the bottle with different force demonstrating that water pressure depends on the column of water above it The lowest hole spilled the water with the highest force, the middle one with a lesser force and the one on the top with the least force

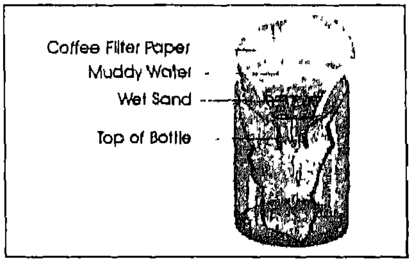
A plastic bottle was taken and a hole made at a height of 2 inches from the bottom The hole was covered with a finger and water was filled in the bottle Now the mouth of the bottle was capped tightly. Water did not flow out of the hole even when the finger was removed. Now the cap of the bottle was unscrewed and water flowed out of the hole! This was because as soon as the cap was unscrewed the atmospheric presssure pushed the column of water down.

2. When a paper and a stone are thrown from the same height the paper takes more time to reach the ground than the stone. Why?

3 Why do stale eggs float in a glass of water, but fresh ones sink? At the rounder end of an egg is a tiny air bubble As the egg gets older, it loses water to the atmosphere and air is drawn in to replace it So the older an egg, the more buoyant it becomes Plopping an egg in a glass of water is a quick way of testing to see it is fresh However, eggs may float without actually being bad, so if you are in doubt about their freshness, crack them open!

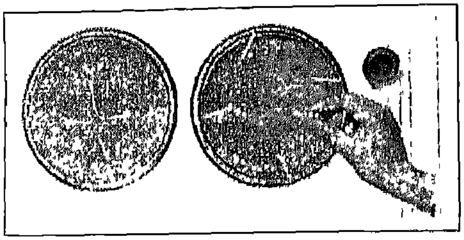
Experiments by Class 4

1 A model on how the water can be purified was made Impure water was processed and within few minutes pure water came out.



2 An experiment demonstrating surface tension was presented. In a bowl of the water, a boat made out of the cardboard was made to float. Drops of plain water were put in the

water, after which drops of soap solution were put and the boat started moving. This happened because the soap broke the surface tension of water



Questions asked during the assembly

Everyday at the end of the assembly a question was asked. Children were supposed to find the answer and give it the next day. A new question was asked every day.

Some questions asked were:

1. Why does a paper (white or coloured) turn black when it is burnt?
2. When we put salt in water it dissolves, but when we put oil in water it floats. Why?
3. When one throws a ball up, it comes down. Why? Why doesn't the sun or the moon come down?
4. When we open our mouth during winter season, smoke comes out of it. Why does this happen only during the winter season?

Children answered all these questions and the educators gave the scientific reasons for the happenings.

Badges given in the assembly

Children were given badges for their participation and good performance in the competitions.

For example:

- Winners of the competition arranged in the science lab on the first day were awarded badges during assembly on the next day.
- On the second day, 'Discovery Time' was held in the theme period, and children of the group that won were given badges on the next day.
- On the third day the winners of the Science Quiz were given badges in the assembly.

Children felt very proud of their badges and many of them wore all their badges on their shirts for the week. These badges were made of inexpensive cardboard cut into various shapes and worn with a safety pin.

Theme Classes during the Week

First day

A lab was set up by educators where children could explore by themselves the material and experiments kept there. On the first day some simple science experiments were put up to prompt children to come up with their own ideas. Popular science games like 'Magnetic Car Race' and 'Treasure Hunt Game', Static electricity and Sound energy experiments were kept in the lab. Children enjoyed doing these experiments. The whole class was then divided in pairs for the competition. A competition was conducted for students of classes 3 and 4. Each class had three winners. All the classes started their theme period by visiting the lab.

Second Day

The theme period was dubbed "Discovery Time" The main aim was to give children some material and ask them to find an answer to the questions

Children of classes 1 and 2 were given a playing card, a pin and a bar magnet and asked to lift the card without touching it Most children knew that a magnet attracts a pin, but they could not figure out how to lift the card.

After 15-20 minutes of hit and trial, one team accidentally lifted the card by keeping the pin under the card. This also went on to prove that most great discoveries were actually 'accidents'.

Class 3 and 4 students were divided into teams. Each team was given a glass, a candle, saucer and some water and asked to fill the inverted glass with water. It was really puzzling for the young scientists They tried various ways-they put the glass upside down and lighted the candle on top of the glass. Some children even made a hole in the saucer. At last a team was able to discover the trick in the experiment-i.e. light the candle and stick it on the saucer, then pour water in the saucer and then invert the glass over the saucer. The water enters the glass due to a vacuum created as the burning candle uses up air in the glass.

Third Day

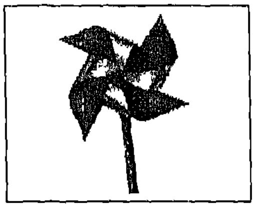
On the third day all the teachers and students of classes 1 to 4 assembled in the Gym to watch Mr. Chaughn's show. He had specially come down from Bhavnagar with his son. They enacted the role of a scientist and a 'Sadhu' They showed various 'chamatkars' done by the sadhus-like milk flowing out of the sadhu's hand or 'Chundadi' taken out of the coconut, etc The scientist made the children realise that there is a science behind these 'chamatkars'. The best part was that they first explained and then demonstrated what actually happens during these 'chamatkars'.

After this function, during the theme periods classes 1 and 2 played a 'Science Quiz' Simple questions, based on scientific facts were asked. The class was divided into groups, and the group with the highest score was declared the winner

The children of classes 3 and 4 visited the Community Science Center. They were shown the Physics and Biology lab there. Simple experiments of Water pressure and Magnetic repulsion were shown to the children.

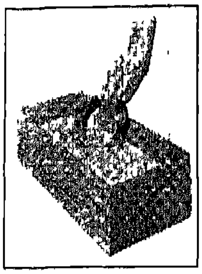
Craft Classes

During the week children made models during the craft periods. Children of class 1 made windmills and children of classes 2,3 and 4 made gliders



Science Lab

For the science week one of the spare classrooms of the school was converted into a science lab Various apparatus like the microscope, test tubes, burners and flasks were displayed in the science lab. Various charts containing details about great scientists were made and kept in the lab Educators performed some experiments in the lab Various corners like a Treasure Hunt, Car Racing, Sound Energy Corner, Static Electricity Corner, and Magnetic Corner were set up Following are the details of each corner



1. Treasure Hunt

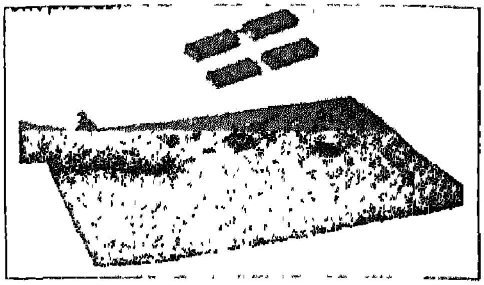
Material needed. A horseshoe magnet, a shoebox, sand and objects like a rubber, paperclips, cotton, a coin, a button, a teaspoon, wool, pencil, etc.

Procedure: Fill the box with sand and hide the different objects in the sand Ask a child to hold a magnet in his hand and then move it through the sand in the box. The magnet will attract certain objects Then ask children to make a list of objects attracted by the magnet and those left in the box.

2. Car Racing

Material needed· Two bar magnets, a cardboard sheet, and a car.

Procedure Firmly attack a bar magnet to the roof of a toy car Use some strong sticky tape Make sure that the magnet is well balanced Cut out a racetrack from the cardboard sheet. Attach it with glue to a sheet of green card. Add some trees Place to the end of the magnet at the rear of the car. If the car moves backwards, turn the magnet you are holding the other way round. You can push or pull the car round the track by holding the magnet at different places.



Game:

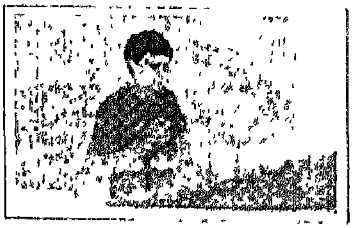
Make such two models. Put a finish signboard at the end of the track Ask two children to hold the bar magnet at the end of the track and reach the finish line. A competition can be held between two children. A time of one minute can be given and the child who reaches the finishing line first is the winner.

3. Sound Energy Corner

- *A Bottle Xylophone:*

Materials. 8 identical empty bottles or bowls, water and a Pencil

Procedure. Line up the bottles in a row fill the first bottle almost to the top with water. Tap it with the pencil and listen to the sound. Pour a slightly lesser quantity of water in the second bottle Add an even lesser quantity of water to each subsequent bottle. You now have a bottle Xylophone. Play the Xylophone with a pencil.

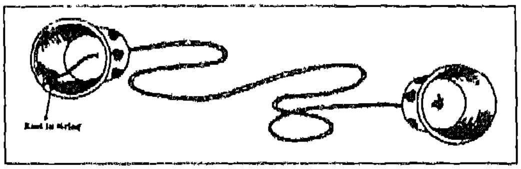


4. Rubber Band Zither

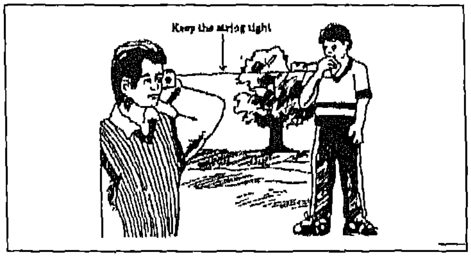
Materials Rubber bands, a small tray or shallow tin

Procedure Loop some of the rubber bands around the tray or tin. Pluck them, one at a time, by gently pulling and then letting go The rubber bands vibrate and produce musical notes.

5. Twine Telephone

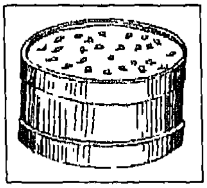


Materials. 2 paper cups, a long piece of twine, a nail. *Procedure* With the help of the nail make a hole at the bottom of each cup Thread the twine through the holes in the cups and tie a knot at each end to prevent the twine from slipping out. Give one cup to your friend and walk away from each other so that the twine is stretched tight. Speak softly into the cup Your friend will hear you clearly. Can you figure out why and how this happens?



6. Dancing Drum

Materials. Bowl, rubber balloon, rice

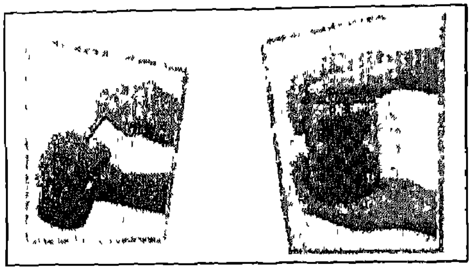


Procedure Make a drum by tightly fixing a stretched rubber balloon or a plastic magnetic sheet on the mouth of a big bowl Sprinkle the rice on the drum. Gently tap the skin of the drum The vibration of the drum makes the rice dance.

7. Magnetic Corner

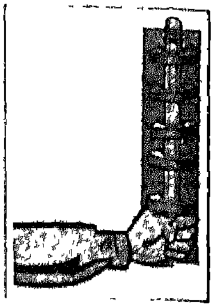
A three dimensional Magnetic Field Demonstrator, which is part of Eklavya's *Taleem* division was used to demonstrate the formation of the lines of force around a magnet

The main body of the game is a plastic cylinder filled with oil in which fine iron filings are suspended. The container is hollow in the center through which a cylindrical magnet is placed. The iron filings arrange themselves around the magnet according to the lines of force, which can be observed through the transparent glass container.



Base on the same principle a Students' Magnetic Field Demonstrator was developed by Eklavya. The game is a thin, flat, transparent plastic box filled with iron filings. The box is sealed tightly from all sides so that the iron filings cannot came out of it. A simple, rectangular bar magnet is moved over the box and various lines of force are obtained. Children also make believe stories of a teacher in the classroom with students where the bar magnet is the teacher and the iron filings are the students and the Mahabharata where they show the war fought between the Kauravas and the Pandavas.

(A number of such interesting science games which are part of Taleem are practised.)



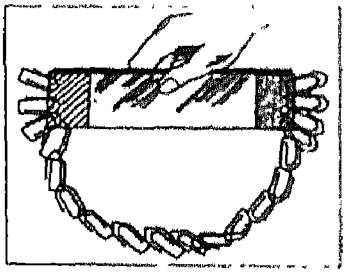
Materials: Hollow magnet rings, a wooden pencil

Procedure. Arrange in such a fashion that the opposite poles and each magnet lie one over the other. Since the magnets repel each other when you move the pencil they appear to dance around it

Materials: Wood Shavings, paper clips, a bar magnet, a glass of water

Procedure: Mix the paper clips with the wood shavings. Move the Magnet over the mixture What happens? Put the clips in the glass of water. Dip the magnetic in the water. What happens? Put back the clips in the water Move the magnet around the outer surface of the glass What do you find?

Materials: a bar magnet, some paper pins.



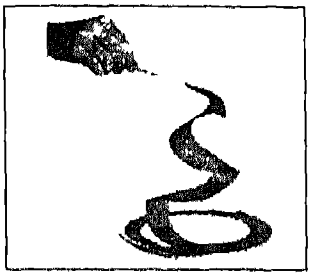
Procedure: Place the magnet on a table. Sprinkle the paper clips on it Take the magnet turn it upside down and shake gently. The ends of the magnet to which most of the clips remain struck are the centers of attraction of the magnet. They are called the poles of the magnet.

Static Electricity Corner—
Snake Charming

Materials: Tissue paper, Silk handkerchief, Plastic pen, Metal plate or tray

Procedure: Cut out a spiral from a circle of paper with scissors. Lay the tissue paper spiral on the metal plate. Rub the plastic pen vigorously on the silk. Use the charged pen to draw the center of the spiral gently into the air.

Rubbing the plastic pen vigorously on the silk makes it take electrons from the silk and it becomes negatively charged



lectric Chair

aterials: A plastic chair, a towel made f acrylic fibre, somebody to sit on the hair

Procedure Ask your friend to sit on the plastic chair taking care that his feet do not touch the ground Beat the towel on the back of the plastic chair in one direction only Ask somebody from the audience to shake hands with your friend. He will feel an electric shock!

This happens because the charges from the towel are passed on to the chair when you beat it The human body is a good conductor of electricity and your friend gets electrically charged When the shakes hands with somebody earthing takes place and the other person feels a shock. In fact if you bring your finger near his you can see small sparks of static electricity

'Fun With Science Week' in Eklavya Middle School

Assembly

First Day

The first day of the science week started with the celebration of Edison's birthday. Two students made a presentation on Edison in the assembly They are informed about the presentation a week ahead. The students read books and other material available in the library on the Edison. They tried to find out information about him on the internet. Both students made a very nice presentation, where one spoke on the childhood and personal life of Edison, while the other focused on his inventions in different areas.

Second Day

In the assembly on the second day two students from class 5 gave a "Magic Show". The educator thereafter explained the scientific reasons behind the magic. Following are some magic tricks performed by the students:

Pick the straw trick. One of the students was called up and blindfolded. Then he was asked to show the box full of straws to the audience and drop in the specially prepared straw He then announced that he would find the straw by the 'Power of Thought'. He put his magic wand into the box and stirred the straws The wand attracted the special straw and he pulled it out.

Bed of nails The student blew up a balloon, tied a knot around its neck, and put it on the table He showed a bed on nails to the audience and demonstrated how sharp the thumbtacks were. Then he pressed the box down on the balloon and nothing happened. Then he burst the balloon with a single thumb-tack.

Third Day

All throughout the week students were encouraged to bring various experiments to the class. So on the lasy day of the Science week the best experiments from each class made presentations and performed experiments during the assembly It was a good learning experience for students and educators as various topics were discussed giving detailed explanations.

Similarly the winners of the debate competition held on the third day were given badges on the next day.

Science Periods

First Day

After the assembly, for one hour all the students were involved in a game called 'Crazy Inventions'. Here various material were keep in the central courtyard of the school Students could use this material to invent and perform their experiments. The materials kept were Bottles, straws, papers, scales cello tape, cardboard, tomatoes water, coins, pebbles, leaves boxes, grains, marbles, bowls, pencils, old newspapers, cutters, chalk colours, tumblers, cups and saucers, plates, sugar, salt, rubber bands, paper pins, scissors, fevicol and few pieces of cloth

Some of these were needed for the experiments, while some of these were kept to confuse children.

Now the students of the school were divided into groups of 15 each There were 5 groups with students from various classes in each of them So each group had students from classes 5 to 8. Each group was named after a gas like Oxygen, Carbon dioxide, Hydrogen, Nitrogen, and Helium. Each group was assigned an experiment which they had to invent and demonstrate during the day. The experiments allotted were such that they sounded crazy but were possible. Following is the list of the five crazy inventions given to each group:

1. Produce the spectrum on a piece of paper.
2. Get a coin into the bowl without touching it.
3 Pick up a marble without touching it.

4. Throw the tomato from a height, taking care it does not break
5. Balance a box on the edge of a table.

One hour was given to the children to perform the experiment assigned to the group The students observed the material and picked up whatever material they though they would need. They tried out various crazy things and were discussing within their groups about the procedure they should adopt. Three groups were able to invent a procedure and perform the experiment. The students were happy and proud of themselves for having Badges given in the assembly

On the first day the group, which was able to perform the experiment and give the explanation behind it were given badges on which 'Mr Inventor' was written The badges were given on the second day in the morning assembly On the second day the winners of the quiz competition were given prizes in the assembly.

Similarly the winners of the debate competition held on the third day were given badges on the next day.

Second Day

During the science periods 'Inter Section Competitions' were held for the students of all classes.

A Quiz competition was held between the students of class 5α, β and γ. Similarly an intersection quiz was held for class 6. Students of class 7 were given a puzzle to solve in the form of a worksheet. Across word puzzle was given to class 8 students, which they solved on a worksheet

Third Day

A debate competition was held. Students were given the topic of debate a week ahead and asked to volunteer as participants

The topic of the debate was the same for both the participating Classes – VII and VIII. The topic was· 'Biotechnology useful or harmful?' Some students spoke for the motion and some against it. The interesting points that came up were importance of biotechnology in the field of cattle breeding and producing artificial seeds of better quality Some points against the motion were killing of sheep, embryos, guinea pigs, etc. for experimenting Human cloning was also discussed

Students of classes 5 and 6 were asked to speak of 'If I were a computers'. Here students included various parts of the computer and gave humorous yet innovative ideas.

Main Learning

At the end of the week, eductors found that tremendous learning had taken place.

At the start of the week, educators were not very sure about the outcome of this Science Week But the combined effort of students and educators ensured that the three days of fun and learning-by-doing went a long way in making study of science interesting.

Smaller children, especially those from classes 1 and 2 participated actively in the science projects and experiments In fact, these children even tried to explain the scientific reason behind each of their experiments an were very confident while showing experiments to older students. Children learn better when their curiosity and need to explore is satisfied

Such weeks are also celebrated for other subjects like Maths, Hindi and Reading in Eklavya School, Ahmedabad

CULTURE SPECIFIC PEDAGOGIES

India is a multicultural, multilingual and multireligious society Every region and stage has its unique identity This would have implications for the pedagogical approaches to be followed in different contexts. Internationally, pedagogy is perceived not merely as a science of instruction but as a culture or as a set of sub-cultures as well which reflect different contexts and different teaching behaviours-inside and outside the classrooms The pluralistic nature of Indian society needs to be reflected in the pedagogical approaches. Since there is no one universal way in which learners learn, there is a strong need for looking into the specific cultural context in which a learner is placed. Though all learners process information in roughly similar ways, the content of processing varies considerably from the tribal society to the high socio-economic stratum of the urban area Pedagogy, therefore, should be cultural specific. Instead of using one uniform mechanistic way of teaching-learning, cultural practices such as story telling, dramatic, puppetry, folk play, community living, etc. should become a strong basis of pedagogy. Cultural specificity should get embedded in the pedagogical practices to be evolved for the tribal, rural, urban and other ethnic groups and communities. This would lead to joyful learning and the involvement of the school with the local people, their festivals, functions and life styles (Page28)

National Curriculum Framework for School Education-2000

Effect of Pupil Location on the Mastery of EVS Competencies in Standard I

P. Easwari
Senior Lecturer
District Institute of Education and Training (DIET)
Oddanchatram, Dindigul (Dist.)
Tamil Nadu 624 619

The way children are seated in a classroom also matters in their learning achievement and performance in other activities. This research conducted to find out the effect of pupil location on the mastery of EVS competencies shows that every child in the classroom could be a part of the action zone, if s/he is properly located.

The progress and prosperity of a nation are ultimately related to the maximum growth and development of her children. Modern researchers have shown that the years between 3 and 10 years are of the greatest important, because the impression formed at this stage may last forever, or for a very long time. During these years the child adopts habits, attitudes, behavioral patterns and values from the environment and learn to become well adjusted member of the society to which he or she belongs. Studies have clearly shown the need for enrichment of environment and experience particularly in the first five or six years of life in order to enable each child to develop to the full, whatever potentialities he/she has. Parents and the society can do their best to provide the necessary nutrition and environment to enable each child in the country to grow to his/her utmost limit.

Children learn from their environment all the time. They are curious and so they observe, and having observed, they wonder. Encouragement helps the children to sharpen their senses, their minds and their reasons; thereby helps the children to become more alert, more observant and more thoughtful.

The school is an extremely influencing factor in the development of children. A warm encouraging approach in which all concerned share a solicitude for the needs of the child, is the best motivation for the child to attend schools and learn.

The school is the place where opportunities are provided for a joyful, innovative and satisfying learning activities. These opportunities are organised differently according to the learning abilities and age of the children.

A number of factors militate against the success of the lower class child. The incongruity between the attitudes and motivation of the lower class child was seen as an important factor. The school is a strange and often hostile environment for lower class children.

"What happens to the enthusiasm, and spontaneous expressiveness of the kinder garten as he goes on through the elementary school? Why does he gradually lose wonderful ways?"

Location of Pupil in a Class Room

Location of the pupil in a classroom means the place where the child sits in a classroom. In an ordinary classroom, pupil location differs in many ways. No two classrooms are alike in pupils location. Nor two schools adopt the same methods of pupils location in the classroom. The pupil location in a classroom varies according to the pupils choice, teacher's choice, pupil's height, pupil's body structure, sex, age, classroom size, the availability of space etc.

"Does a pupil location within a classroom make a difference? Are individuals in front more active than those in the rear? Are those in the center more active than those on the aisles, regardless of the type of the room? Do interested students sit closer to the teacher or do students take a greater interest if they do sit closer to the teacher?"

Location does make a difference and participation is highest among pupils seated across the front and down the middle of the room. This action zone of the classroom was shown by the study conducted by Adams and Biddle, 1970; Gump and Ross, 1977. They have proved that teacher location in the classroom.

In an ordinary classroom where the students sit one behind the other, forming straight rows and the teacher seated in front of them at the center of the classroom, only 6 students out of 20 are activated and form the action zone. If the teacher moves from the center to the rear side, a new action zone is formed, the action zone formed previously is no more. Thus the teacher-pupil location in a classroom affects the achievements of the students. Both teacher location and pupil location determine the extent to which the pupil participates in the learning activities.

Competency

Many psychologists believe that human beings are born with some of survival instinct for competence, a drive to master our environment and thereby thrives within it This competence motivation impels even the very young child to be constantly curious, constantly experimenting.

Curiosity, competence motivation however, are tender instincts They can be suppressed or nurtured by the negative or positive feedback received from adults and peer groups. This negative or positive feedback affects the personality development of a child.

Mastery of Competencies

The concept of mastery of competencies indicates that each individual is a potential learner and s/he can master the competency equally well provided the learning materials give 'ample opportunity of interactions to master the competency and learns are given autonomy.

Children acquire competencies fast through the activities designed to put across in a painless way, in other words learning must be fun. Games and activities can help to introduce new concepts and enable children to develop thinking skills and to master the competencies.

A child should achieve mastery at each stage of learning before going to the next stage. Here the main tasks of the teacher are (I) to decide the level of mastery and (ii) to provide guidelines for the attainment of that specific levels of mastery. The basic promise of mastery of competencies is that virtually all children can master most of what is being taught in the classroom. The mastery of competency has changed the basic concept of classroom learning, needs much more research attention for its effective implication in our contemporary teaching learning situation.

Competency based education, also known as performance based education is a new approach to teaching, having as its core, the ideas of accountability and competencies This accountability is accomplished by breaking teaching into discrete competencies of behaviors- which can be stated as objectives Mastery of these competencies is then possible (Unwin and Mc Aleese 1978)

The accomplishment of the learning objectives can be observed and measured in the form of specified learner behaviors In order to facilitate this, performance goals are specified and agreed to in great detail much in advance of instruction. The teacher is held responsible, not for his students "obtaining a passing grade" but for attaining a given level of competency in performing the essential tasks of learning. Students' progress rate depends on demonstrated competencies. The emphasis is laid on exit and not on entrance requirements. Further the focus is being on acquisition of specific competencies by all students. Time becomes variable and depending on the needs and capabilities of the learner s/he is allowed to attain the competencies at her/his own pace.

Competency based education is therefore unique in the sense that it focuses on the students acquisition of pre-specified, agreed-upon competencies and demonstration of these specified through objective assessment. Learning or instructional objectives are made explicit and the achievement of these objectives is observed in the modification of learner behavior. Minimum levels of achievement of these objectives are established criteria of success

Minimum Levels of Learning would actually represent a rational criteria adopted for judging the adequacy of the curricular inputs provided and the learning outcomes to be expected

Implementing the Minimum Levels of Learning should logically be preceded by studies on the present status of participation of children in the classroom activities Learning in any school subject is a continuous process, whereby acquisition of one competency is a pre requisite to the acquisition of some other competencies The learning continuum is a progression of competencies from the earliest learning experiences to the level expected to be achieved at the end of elementary schooling

Factors related to Mastery of Competencies

While arriving at the competencies as minimum levels of learning for various grade levels, factors, such as needs of the child his capacity to learn, the knowledge and attitudes developed as a result of experiences at home, community school and classrooms later expectations from the child would all play an important role.

A thorough understanding of the present opportunities experienced by children in a classroom activities could enable the teacher to reform her approach in achieving 80% M.L.L. competency. Understanding the difficulties faced by children while participating in the activities could enable the teacher to change his/her attitude towards children Even though the personality of each and every child varies, it is necessary to know the ways and means to make all children participate in the MLL activities. Experiencing the activities has an effect on the present action of the children and on their potentialities to future action.

Statement of the Problem

Though there is a tremendous increase in the number of schools both in the rural and urban areas, the classrooms are over crowded. Recent studies on primary education has given a clear picture that the levels of learner-achievement are rather low, which means the quality of education is not appreciable. The low achievement of the learner is mainly due to the fact that the opportunities provided to each and every child are insufficient in terms of achievement This low achievement depends on many factors Pupil's location in the classroom is one of them. Pupil's location in a classroom has its own effects on the achievement of the learner Since, no order of pupils location is adopted in practice, few achieve the desired educational goals, leaving the majority of the classroom unskilled. If there is an order in the pupils location in the classroom, the problem of lower achievement will be solved Thus finding a solution to the lower achievement, solves the problem of stagnation and drop out, which are the major set backs of elementary education. Hence, its clear that the child takes his first important step in the long and often difficult journey through the land of learning to master the competencies only in the elementary or primary school

There is very little chance for developing skills and abilities among primary school children, if the conventional method is followed in classrooms. These traditional methods should be replaced by learner centered methods of instruction

The investigator after having frequent visits to the elementary schools and classroom observations realized the fact that primary school children showed much interest in learning by doing activities rather than simple listening to the teacher. Teaching through Reformed Pupil Location classroom organization, gives more freedom to all intellectual levels of children in mastering the MLL competencies.

Hence the investigator felt the urgent need for providing more practice in the above stated method to the Standard I students and attempted to find the effects of this method on the mastery of EVS competencies.

Objectives

1. To find out the effect of pupil location on the mastery of EVS competencies.

Hypotheses

1. There is no significant difference in the mean scores of competencies in EVS of control group of standard I students before the treatment.
2. There is no significant difference in the mean scores of mastery of competencies in EVS before treatment and that after treatment in the control group of standard I students
3. There is no significant difference in the mean scores of mastery of competencies in EVS of control group and of experiment group of standard I students after the treatment

Significance of the Study

There are imbalances not only in the matter of enrolment of children in the various parts of India, but also in the educational achievements of pupils Recent studies on primary education shows that levels of learner achievement are rather low (Dave et al , 1988, Govinda and Varghese 1993, Skukla 1994, Bashir et al , 1993, Jangira 1994, Varghese 1994). Hence fulfilling the dream of universal elementary education depends heavily on the possibilities of developing minimum competencies in children as a result of the sequential learning that takes place as the child progresses in school. Uninteresting methods, no proper seating arrangement for children (i e. the location of children) contribute to the above fact Proper interaction in the classroom lays foundation for enabling children to perform well in the classroom. Proper and enriching interaction is possible when only children are placed (located) well in the classroom It is 'therefore' significant to study the location of pupil and its impact on their achievement in the class.

Review of related Literature

Patole (1967) in a study of teaching science in rural primary schools explored the existing weaknesses and tried out activity based method which was found superior to traditional one.

Jha (1979) compared the different methods of teaching high school biology and reported superior performance in the case of activity bases approach Kathuria (1984) conducted a study on the four different approaches namely (i) usual teacher-led approach, (ii) the peer group discussion approach (iii) self instructional approach and (iv) the mass media approach.

The major findings were:

1. The peer group discussion approach and mass media approach were equally successful
2. Peer group and mass media approaches were found to be better than the teacher led approach
3. The mass media approach excelled the self-learning approach.
4. It was found that self-learning and peer group approaches were more suitable to rural setting and the mass media approach for urban settings.

Yamanoto's surveys show that children are afraid of losing face, being thought of as unattractive, stupid or dishonest. It is more troubling to wet their pants in class, get a bad report card or repeat year, for example, than it is to undergo surgery or be confronted by a rival baby brother or sister For a child a blow to self-esteem is a terrible thing to endure. One of the terrors of repeating a year is losing the old peer groups approval. And self-esteem suffers when the child is not quickly accepted by the new group.

Stanford University psychologist Philip Zimbardo's research shows shy children often score lower marks and miss out extra curricular activities and in the normal given and take of growing up. Their teen years can become a period of social isolation Shy people frequently earn less and hold less responsible jobs.

Trends toward increased peer interaction continue throughout the pre school and elementary school years. In recent investigation over 400 children ranging from 1 to 12 years of age were observed at homes or outdoors in a middle class neighborhood (Ellis Rogoff and Cromer 1981). It was observed that children were alone 26% of the time solely with other children in 46% of the observations and with both adults and peers 15% of the time Children's peer interaction and play not only provide a critical opportunity to acquire certain social competencies but also have been found to play an important role in the development of self control and in working through or modifying problem behavior in children. (Hartup 1983).

Children who are low achievers often have a record of failure and tend to be passive participants in any learning exchange Low achievers would learn better when placed in the role of peer-teacher than when studying alone, due to increased motivation and involvement in tutoring situation

Not only can peers aid in controlling their classmates but they can also function as peer teachers as well. Older children are sometimes cast in the role of assistant teacher and given responsibility of teaching younger children.

Co-operative environment involve small groups of students who work together to master learning materials. Often the group is heterogeneous, with children of different sexes, abilities and ethnic back-grounds working together for common problem. The goal is to maximize the learning of all students and to increase the mutuality of their relationships with children different from themselves.

Some models are more likely to be imitated than others. Children tend to imitate peer models who are warm and rewarding, who are powerful, who are rewarded by others, and who they perceive as being similar to themselves (Hartup 1993).

Does being imitated have any effect on the model? Serving as a model can increase self-control. Children who had served as self controlling models for other children subsequently showed more resistance to temptation themselves (Toner, Moore $Ashley 1978)

It has been found that the use of social comparison with the peer group as a means of self-evaluation in children increases markedly in the early elementary school years (Harter 1983, Ruble, Boggiano, Feldman and Loeble 1990). The child's self-image and self-acceptance are closely associated with how he is received by peers.

What determines peer acceptance? Children's names, physical characteristics and attractiveness are related to peer acceptance.

Sample

The subjects of the study were Standard I students of two Panchayat Elementary Schools. This consisted of bright students average learners slow learners, shy students, and poor communicators A total of 25 students constitute the sample for the present study from a population of 1715, distributed in 1191 primary schools The independent variable, considered to investigate into the mastery of competencies by the students of Standard I are location of the pupil, location of the teacher, space and organisation of the classroom, students interpersonal assistance and teacher student assistance.

Methodology

In this investigation, the pretest post test-equivalent group design was used to find out the relative effectiveness of the Reformed Pupil Location and the Random Pupil Location on the mastery of Environmental Science MLL competencies

Students sitting in straight rows usually one student behind the other is termed as the Random Pupil Location, whereas the students grouped in a different fashion forming three semi circular rows, starting from the right flank of the teacher to the left flank of the teacher according to their learning abilities is termed as Reformed Pupil Location.

The Reformed Pupil Location starts with the grouping of the children according to their learning abilities. The three groups were slow learners, average learners and bright students. The slow learner group was made to sit in a semi-circle row starting from the right flanks of the teacher The second semi-circle row was formed by organising the average learners to sit in the space between two slow learners, perpendicular to the slow learner group row. Thus, the second row starts from one end of the slow learner group and ends at the other end. The third row consisting of bright students was formed in the same way. Care was taken to see the teacher was in proximity with the slow learners. No student was seated just behind the back of the student seated in front of him. Care was taken to leave enough space between two students for their free movement Care also was taken to avoid children sitting with folded hands.

Each bright student was assigned to cast the role of "peer teacher" in helping the average learners, two at the maximum. The teacher was guided to sit in front of the slow learners, the older and the shy students were made to sit in the average learner group and the bright younger children were assigned to cast the role of peer-teacher.

To begin with, the teacher was guided to instruct the students regarding the steps involved in the MLL competency item (activities). The teacher was guided to engage the children in the participation of MLL activities.

Accordingly two groups of Standard I were selected. The experimental group was exposed to teaching through Reformed Pupil Location and the control group was taught as usual through Random Pupil Location.

The effect of each of the method such as Reformed Pupil Location and Random Pupil Location in the mastery of MLL competencies on the respective group were assessed with the help of pre testing, post testing and by calculating the gain scores in the individual and over all mastery of competencies and comparing both the groups

The competencies to be mastered by students of different class levels are listed in reports such as "Minimum Learning Continuum (1979)", "Minimum Levels of Learning (1991)" and "Pupil Achievement at Primary Level (1986)". Since the study deals with minimum levels of learning in Environmental science (EVS) at standard I, the list provided in the above reports were looked into for arriving at a final list of competencies.

The two competencies out of 15 competencies selected for standard I EVS constituted the criteria for the development of achievement test. 80% or more children mastering at least 80% of the prescribed competencies was kept as the mastery level for the study. The type of criterion referenced test used in this study was objective referenced test as recommended by Shaycoft (1979). This essentially consists of stating the objectives and generating there form precise learning objectives. Items to measure each of the competencies were constructed depending upon the nature of the competency. Competency wise number of items and cut score for mastery are given in table I.

Data Collection

The test thus developed was administered to the students of Standard I who were the subjects for the present study in the months of October and November 1995. Number of items answered correctly for each competency was obtained for each student. Students who obtained 80% or more in each competency were designated as master of the competency measured Those who measured 80% or more of the competencies were considered as the masters of overall competency

Analysis and Interpretation of Data

The analysis of the data essentially involved comparison of the effectiveness of the Reformed Pupil Location and Random Pupil Location on the mastery of MLL competencies

Each research hypotheses of the present study, stated earlier is re-stated in terms of null-hypotheses in operational terms before the relevant statistical test is applied

Comparison of post-test scores of standard I students taught two different classroom organisations-Random Pupil Location and Reformed Pupil Location

Null Hypothesis: 1

There is no significant difference in the mean scores of competency in EVS of control group and that of experimental group of standard I students before the treatment.

To find out the significance of the difference in the mean scores of mastery of competency in EVS of control group and that of experimental group before the treatment, the "t" test was applied

The results are presented in table 2 The results of table 2 shows that the Standard I students of control group and those of experimental group do not differ significantly in their mastery of competency in EVS

Null Hypothesis: 2

There is no significant difference in the mean scores of mastery of competency in EVS before treatment and that after treatment in the control group of standard I students.

To find out the significance of mean difference in the mastery of EVS competencies before and after the treatment in the control group of Standard I students "t" test was applied

Distribution of "t" value on the mastery of competency in EVS before and after treatment in the control group.

The table three shows that there is no significant difference in the mean scores of mastery of competencies in EVS before and after treatment in the control group.

Null Hypothesis: 3

There is no significant difference in the mean scores of mastery of competency

TABLE I

Competency No.	*Competency (Theme)*	*Number of Items*	*Cut Score*
6	Neighbours	5	4
7.	Local Festivals	5	4
8.	Plants, Animals and Birds	5	4
9	Non living things	5	4

in EVS before treatment and after treatment in the experimental group of Standard I students.

To find out the significance of the mean difference in the mastery of competency in EVS before and after treatment in the experimental group of Standard I students, "t" test was applied

The results are presented in the table 4 The Table 4 shows that there is no significant difference in the mean scores of mastery of competency in EVS before treatment and after treatment in the experimental group

Null Hypothesis : 4

There is no significant difference in the mean scores of mastery of competency in EVS control group and that of experimental group of standard I Students after the treatment.

To find out the significance of the difference in the mean scores of mastery of competency in EVS of control group and that of experimental group of standard I students after the treatment.

The results are presented in Table 5

Distributed of "t" value on mastery of competency in EVS of control group and that of experimental group after the treatment.

The results of table 5 shows that the standard I student control group and those of experimental group do differ significantly in their mastery of competency in EVS.

TABLE 2

	Control group		*Experimental group*		*'t' Value*	*Level of significance*
	M	*SD*	*M*	*SD*		
Group I	48.52	11.45	51 44	22.16	0 574	p>0 05
Group II	48 57	12 46	55 2	21.18	1 32	p>0.05
Combined	97 09	12.05	106 64	21 73	1.88	p>0 05

TABLE 3

	ED	*'t'*	*Level of significance*
Comp I	61	1.57	P<0.05
Comp II	-20	0 49	P<0.05
Combined	41	0 56	P<0.05

From the above table, it is inferred that there is a significant increase in the performance of the three categories of experimental group

1. We see that there is a sharp rise in the mastery of competencies among the slow learners from 26 75% to 53 78
2. Relatively a considerable rise in the mastery of competencies among the average learners from 54.6% to 69.38% is exhibited
3. A steady increase is shown in the mastery of competencies among the bright students from 76 28% to 87 22%
4. The performance of the average learners compared with the bright students is relatively parallel But the performance of the slow learners when compared with the performance of average learners is relatively higher. This indicates that "with increased teacher influence the slow learners exhibited greater frequencies of participation responses to mastery of competencies".

Conclusion

It is concluded that there is a significant gain in the mastery of competency in EVS due to the Reformed Pupil's Location. Thus the pupils location in a classrooms gives an effect on mastery of competency.

TABLE 4

Distribution of "t" value on the mastery of competency in EVS before and after treatment in Experimental Group

	ED	*'t'*	*Level of significance*
Comp I	388	11.6	P<0.01
Comp II	488	10 4	P<0.01
Combined	876	11.05	P<0.01

TABLE 5

	Control group		*Experimental group*		*'t' Value*	*Level of significance*
Competency I	50.91	15.56	74.52	13.4	66.79 3 45	16 P<0.01
Competency II	48.41	15.84	144.31	14.95	6.05	P<0.01
Combined	99.32	15.74			9.15	P<0.01

It is concluded that there treatment i.e, the pupil's location in the classroom, has increased the over all mastery of competencies in EVS among the standard I students Cost effectiveness in the implementation of this innovative practice is absolutely nil.

If the treatment is continued, less action zone will not be found in the classroom. In due course all levels of students in the classroom will form the action zone. Thus no one will be designated as slow learners or in other words, all children will master the competencies, leaving no room for stagnation or dropouts.

TABLE 6

Student level	*Percentage of Pre-test score*	*Percentage of post-test score*
Bright students	76 28	87 22
Average learners	54 06	69 38
Slow learners	26 75	53 87

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Impact of Organisational Structure on Burnout Tendency of Female Primary Teachers

PURNIMA SRIVASTAV
K.L.D.A V College
Roorkee U.P

A teacher needs to reinforce him/herself to be effective in the classroom. S/he should have positive attitude towards all those who s/he deals with in school Burnout tendency is a negative factor in the motivation of a teacher to be active in school This study explores the impact of the burnout tendency of female primary teachers and throws light into the problems faced by female teachers in school.

WOMAN plays a very important role in development of the nation and education. Being a teacher she is responsible for the development of the personality of children. Any change in educational system depends on a great extent on the teachers and their attitude. They play a predominant role in shaping the future human resources of the nation and thereby they determine the future destiny of the nation. It is apparent, therefore, and there is no denying the fact that the woman teachers occupy an important place in the system of education in shaping the destiny of the country

These days the entire teaching community especially primary school teachers are severely criticized for their neglect of duties and insignificant role played in the educational process. Especially the standard of girl's primary education in our country is quite deplorable. Most of the primary school teachers are either pent-up alienated or suffering with burnout tendency i.e. a mixture of emotional exhaustion, lack of personal accomplishment and de-personalization. But the most important problem is to identify the factors responsible for female teacher's burnout tendency and finding the solution for these factors If a primary school female teacher reaches a burnout stage, this must be due to certain socio-psychological factors operating on her over a period of time.

Organizational structure of the school is also one of the most important factors related to burnout tendency of female primary school teachers Organizational structure affects not only the behaviour of individuals but also how organization themselves interact.

The structure of an organization refers to all those elements which when put together make an organization without which it cannot achieve its goal It can be divided into two basic parts, physical structure and human organizational structure. Physical structure refers to the infrastructure of the school such as class-rooms, library, laboratories, furniture etc. whereas human structure refers to relationship among people working in the school.

Because the organisational structure is an important factor related to burnout tendency, in this paper an attempt has been made to find out the relationship between organizational structure of school and burnout tendency of female primary school teachers.

Objectives of the Studies

The study was designed to assess the impact of organizatonal structure of schools on the burnout tendency of female primary school teachers. Thus, the following objectives were laid down:

1 To find out the relationship between physical structure of schools and burnout tendency of female primary school teachers.

2. To find out the relationship between human structure of schools and burnout state of female primary school teacher

3 To find out the relationship of physical structure and burnout tendency of female primary school teachers after partialling out the effect of human organizational structure.

4. To find out their relationship of human organizational structure and burnout tendency of female primary school teachers after the partialling out by effect of the physical structure.

5. To suggest procedures for removing the problem of burnout tendency related to organizational structure.

Sample

The study dealt with the primary school female teachers of Varanasi region comprising the districts of Varanasi, Ghazipur, Mirzapur, Balia, Jaunpur and Sonebhadra A total number of 456 female teachers were selected to form the population for this study.

District wise teachers from whom data were selected is given in Table 1.

Limitations

This study is confined to the sample of Varanasi region of Uttar Pradesh only Again this study is based on female teachers of primary schools working in Municipal Corporation and other private organizations. English medium primary schools have not been included in the study.

Methodology

In this study normative survey method was used for collection of data

- For measuring female primary school teacher's burnout tendency an Indian adoption of Maslach burnout inventory was used. This test covers all aspects of the burnout tendency, like emotional exhaustion, lack or personal accomplishment and de-personalization.
- For measuring the effects of the school's organizational structure on female teachers a rating scale of 50 items were used. This scale contained the following areas:
  1. Physical structure
  2 Human organizational structure

Procedure

For data collection tools were prepared and administered on 456 female teachers of primary schools of Varanasi region of Uttar Pradesh. The raw score of female teachers of Varanasi region were tabulated Descriptive statistical techniques were used for analysis of the data

Analysis and Interpretation

Table 2 reveals that correlation between school female teacher's burnout state and organizational structures are significant at 0 01 level in positive direction. It means that in those schools which have poor organizational structure (i e.) Physical and human) are likely to have higher number of burnout female teachers

Table 3 shows that burnout state is significantly correlated with physical structure beyond 0 01 level when human organizational structure is partialled out It can also be concluded that organizational structure place an important role along with the physical structure in determining the burnout state of female primary school teachers. It can also be inferred that the female primary school teachers who have good

TABLE 1
District wise primary school teachers and usable returns

Sl No	*District*	*Number of Schools selected*	*Number of teachers contacted*	*Subject agreed*	*Usable returns*
1	Jaunpur	21	165	150	121
2.	Ghazipur	17	154	142	109
3.	Mirzapur	13	91	75	50
4.	Balia	15	121	102	72
5.	Varanasi	24	175	134	78
6	Sonbhadra	7	55	38	26
	Total	97	761	641	456

human organisational structure are likely to have a lesser degree of burnout state, provided they have good physical structure of the schools

Table 4 reveals that the relationship of human organizational structure with burnout state of female primary school teachers is much altered from what it was when physical structure was not controlled Though, partialling of physical structure does not affect the kind and direction of the human organizational structure yet it has affected its magnitude.

The conclusion has been drawn that the organizational structure of schools are positively and significantly correlated with burnout state of female teachers. It means that those schools which have poor human and physical organizational structures to are likely to have high burnout female teachers.

The important finding of this study was that the female primary school teacher's burnout state and organizational structure of schools are closely related. It is not very difficult to assume that the female teachers who work under poor organizational structure will be more burnout than those who have good organizational structure. Poor organisational structure may lead to exhaustion, frustration and burnout.

The investigator found during the period of data collection that several female primary school teachers were working under the stressful condition. They reported that they were not given the basic minimum facilities such as school buildings, teaching material, the library etc. The teachers and the students were not provided even the furniture to sit properly Therefore, the

TABLE 2

Correlation between burnout state and organisational structure of female primary school teachers.

N = 456

Sl. No	*Organisational structure*	*Coefficient of correlation*	*Level of significance*
1	Physical structure	0.4915	0.01
2	Human structure	0.5404	0 01

TABLE 3

Partial correlation of physical structure with burnout tendency. Partialling out human organisational structure.

N = 456

Sl No	*Coefficient of partial correlation*	*Level of significance*
1	0.2766	0.01

burnout tendency in them seems to be a natural consequence of the conditions under which they are forced to work.

In the light of the data, the following interventions are needed to reduce the burnout tendency of the female primary school teachers in relation to their organisational structure.

- It should be a function of administrative authorities to ward off this burnout tendency as far as possible An awareness of this fact may urge upon the administrative authorities to provide proper essential facilities such as proper working conditions, better pay, increments, medical and other facilities and also opportunities of promotions.
- They should provide needed teaching aids to them and maintain the proper organisational structure of schools. They should provide positive situation to them in which a good organisational climate maybe developed.
- There should be a professional development programme for every teacher
- Relationship between groups of teachers, principal, administrator and other staff members should be congenial

The female teacher burnout may be considered as an important construct having wide and comprehensive applications and implications in the field of education. It is not a small factor which can be studied in a small area. So better efforts should be made in future.

TABLE 4

Partial correlation of human organizational structure with burnout partialling out physical structure.

N = 456

Sl. No	*Coefficient of partial correlation*	*Level of significance*
1	0 3714	0.01

Future Expectations of Primary Teachers: A Trialing Exercise in In-service Teacher Training with Teaching Aids and Interactive Methods

Ganga R. Singh, Durga Ray and L. Kishore
Training Resource Group, Centre for Unfolding Learning Potentials
68, Jai Jawan Colony (III), Arvind Marg
Jaipur 302 017

Pre-primary and primary teachers (N=60; lower middle socio-economic urban background; average age : 35) were exposed to various topics of Education and Learning through the use of flash cards and pocket board, educator's big book for illustrations; and plastic-sheet-display-board with thin polythene sheet cut-outs as a trial exercise. After the exposure, the participants were asked to respond to two questions . (i) An important idea that has come to your mind that you would like to pursue after this exposure? (ii) Areas you would like to learn more about through such exposures? It was found that the teachers preferred the most the learning-by-doing aspect (60%) and wanted to know more about the areas of. (a) rapid learning methods (50%) and, (b) communicative approach to language learning (40%).

Introduction

At times, one hears the remarks of these kind : 'Those who cannot teach cannot become teacher educators' or 'Teacher trainers must demonstrate the practices they preach about' or 'Teacher educators and trainers must behave like classroom teachers; be in touch with reality and have a feel for the real classrrom situation' Often, during teacher training programme the practising teachers are *advised* and *sermonised* by the trainers and educators to use teaching aids and be sensitive towards the diverse learning styles of students with eductors really *'demonstrating how'* in a real classroom situation

Even a cursory look into our classrooms would indicate the state of teaching-learning that is taking place in schools There is very little transfer of training to the classroom. The fault basically lies with the trainers and the kind of training they are imparting to teachers and the personal examples they are setting

Kishore and Kulhari (1995), describe training as a multifold mechanism which deals with the understanding of subject concepts, content, learning needs of children and the process of transaction of relevant concepts and learning skills Mainly, the trainer's role is three-fold First, as a trainer she or he has to have participative training skills Secondly, as a teacher she or he has to have teaching or instructional skills Thirdly, as a facilitator, she or he must be well-versed with learning skills. Furthermore, the teacher educator must have a proper insight for individual differences among trainees and understanding the subject matter at the conceptual, structural and process levels

Many educators and organisations (Chari, 1988; Kakkar & Dhand, 1988, NCERT, 1988, LJ, 1997) stress for recurrent teacher-training and back-up support to teachers so that learning by teachers becomes an on-going process.

Keeping in view the foregoing, an attempt was made to make use of teaching aids for the topics related to teacher education and let participants reflect on the teaching aids used after every training episode or session

The Problem

The problem for the present study can be stated as follows: *A trialling exercise for teacher training with the help of teaching aids and interactive methods to assess the future training expectations of primary teachers*

Methodology

Sixty pre-primary and primary teachers of Brightlands School, Jaipur formed the sample (qualified teachers, average age: 35 years, urban lower middle socio-economic background) for the trial exercise The investigators prepared the one-day training package (Kishore, Singh and Ray, 1998) in consultation with the principal of the school to make the re-orientation need-based. It was agreed upon that the re-orientation must put theory into practice It took two days to prepare the teaching aids to work as training tools for the programme. The short description of the training tools is given below.

Pocket Board and Flash Cards: A pocket board with 30 pockets was made with a transparent plastic sheet which could accommodate flash cards of the size of one-eighth of a cardsheet. The flash cards were meant to be used for mind-mapping the participant and work out a mission statement on education.

Big-book: Eight transparent polythene bags of the size equal to half the card-sheet or chart paper tagged together formed the big-book. Cardsheets with ideas in the bullet-form or point-frame and visuals when slipped in the polythene bags results in the big-book for use in the training programme

Low-cost Materials and Objects: Some inexpensive materials and objects like straws, paper, rubber-bands, polythene sheet cut-outs were used to demonstrate certain activities like straw saxophones, straw clappers, straw electroscope, straw hydrometer, straw air-screw, straw structures, paper strip spinning fish, paper-strip spinning blades, spinning paper cone, plastic sheet display boards, polythene sheet cut-outs. These were used to enhance interactivity with participants for deriving the learning principles

Polythene Double-fold Display Set-up: A transparent polythene was doubly folded so as to take in a foolscap drawing sheet into it. This set-up was nailed on to a wall and was rubbed with paper to charge it first and descriptions were placed into it.

The over-all structure of the re-orientation was reviewed through a discussion among the three investigators which should be in consonance with the philosophy of the CULP (1998). The programme structure of the re-orientation programme is given in Table 1

As a preparatory task before the re-orientation, the session-wise trainer's guide-sheets were prepared and given to the participants.

Furthermore, a pre-programme clinical try-out was carried out which took eight hours to refine the programme which was supposed to be school-based in the reach-out format.

Data Collection and Analysis

After the re-orientation programme, the responses of the participants were sought on the following two questions.

(i) An important idea that has come to your mind that you would like to persue after its exposure.

(ii) Areas you would like to learn more about through such exposures.

The responses of the participants which were classified into categories have been given in table 3.

The table reveals that learning-by-doing is the most preferred idea the teachers wished to persue after the reorinetation.

The over-all reactions of the participants towards the programme on the basis of the three-point scale, i e. (a) favourable; (b) favourable to some extent; (c) unfavourable were collected The reactions of the participants are summarised in the following table:

The table shows that participants' reactions toward the interactive re-orientation programme is favaourable at .01 level of significance.

Findings and Discussion

The findings of the present study are as follows·

(i) The most preferred idea which pre-primary and parimary teacher wish to persue is 'learning-by-doing' with a weightage of 60%.

(ii) The participants' reactions are significnatly favourable at .01 towards interactive re-orientation programme.

TABLE 1
The Structure of the Teacher Reorientation Programme

Sl No	*Session*	*Method*	*Expected outcome*	*End-of-session exercise*
1	Introductory	Self-introduction along with one expectation from the programme	Familiarisation with the objectives of the programme	Getting seated in a semi-circle on floor and getting informal
2	What is education all about?	Mind-mapping with flash cards and pocket board	Mission statement about education	Reflection in pairs on the uses of pocket board and mission statement
3	Assumptions about learning and children	Use of educator's big book	Crystallization of thoughts about learning and children	Pair-and-share exercise on the possibilities of big-books and assumptions
4.	Use of low-cost materials and objects	Demonstrations and question raising	Derivation of principles of learning	Hands-on experience and question answer session
5	Participants' reactions	Verbal and written comments	Analysis of comments and follow-up scheme	Validictory and informal chat

TABLE 2
The summary of the participants' responses on the two questions

Question No	*Preferred responses (Category)*	*Percentage*
1	1.1 Learning by doing	60%
	1 2 Other assorted responses	40%
2	2.1 Rapid learning methods	50%
	2 2 Communicative approach to learning	40%
	2.3 Other assorted expectations like how to deal with kids, discipline etc	10%

The findings have implications for the teacher education and training programmes. At least 60% weightage in the trainings needs to be given to learning-by-doing aspects or hands-on activities. The training sessions must move from practice or concrete experiences to analysis of these experiences to derive theories or principles The pedagocial principle of learning should also be followed in teacher education programme.

TABLE 3
The analysis of participants' reactions towards the interactive reorientation (N=60, d.f.=2)

Reactions	Frequency		Chi-square
	Observed	Expected	
(a) Favourable	50	20	64.4**
(b) Favourable to some extent	8	20	
(c) Unfavourable	2	20	

** 01 level of significance

Box 1
The trainer's guide-sheets for the conduct of sessions

Guide-sheet 1

1. Ask participants to develop a mission statement on education
2. Put the cards with definition of education in the pocket board,
3. Ask for participants' perceptions about each word so as to draw a mind-map about education

Guide-sheet 2

1. Prepare a big-book on assumptions about learning and children.
2. Hold the big-book in front of the participants.
3. Do a bit of picture reading for a while.
4. Use the big book to explain the assumptions about learning and children.
5. Ask the participants to pair and-share assumptions about learning and children as well as plausible advantages of making and using the big-books for classroom

Guide-sheet 3

1. Make demonstrations with common and inexpensive materials like straws and paper
2. Ask descriptive questions during the activities with inexpensive materials like: What has happened? Describe it. Why is it so? What do you conclude from the activity?
3. Display the learning principles on polythene-clad visual board. The phrases to be displayed are. Concrete

   to abstract, experience to analysis, lower abstraction to higher abstraction, known to unknown, etc.
4. Use the polythene double-fold display set-up with venn diagram of life, learning and love

Guide-sheet 4

1. Divide participants in groups of 5 to 9 members each
2. Ask participants to relive the in their mind's eye what happened during the re-orientation programme.
   - Sequence of events and activities in the programme
   - Methodology of the programme
   - Future expectations from such programme
3. Ask participants to describe their feelings during the programme.
4. Ask participants to give their reactions to the programme on three point scale and general comments.

Incorporation of teaching aids, demonstrations, questions-and-answers, and hands-on activities increase the interactivity in the training sessions leading to favourable reactions and satisfaction of socio-psychological needs of the participants.

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Development of Mathematical Thinking in Third and Fifth Grade Children

A.C. PACHAURY
Sushmita, Sector-A
Sarvdhrarm, Kolar Road, Bhopal 110 042

Fear of Mathematics has been reduced with the introduction of play way and activity-based methods with experimentation and explorations. This research on the development of mathematical thinking in primary school children gives clues for teachers to follow effective ways to develop mathematical thinking through which children could learn the skills and use them in contexts.

Piagetian theory (1952) of cognitive development espouses that 'infants' as well construct their own knowledge through sensori-motor actions Therefore, the premise that individuals create their own knowledge holds good for children, adolescents, and adults alike However, the level of knowledge generation by the infants, children, adolescents/adults differs, because, knowledge creation/construction depends on the level of cognitive development of the individuals Hence, for quite sometime, cognitive theorists, developmental psychologists and even educational researchers had been arguing for the construction of knowledge by the individuals. A clear change in perspective from teaching to learning had been emphasized during the mid 80's. Jean Piaget's Genetic epistemological paradigm on knowledge construction, therefore, has influenced the curriculum planners, and the classroom teachers not only in the developed nations but also among the developing countries of the world.

According to Piagetian theory, operative knowing (quantitative) and processing of information develops in two invariant stages These stages are, (a) Concrete operational (7-1 1 years), and (b) Formal operational (11-15 years) These stages do not exist in a water-tight compartments, but, instead reflect characteristics of the individuals who either belong to the former or to the latter stage of cognitive behaving.

Mathematics learning by the school going children had been affected by a horde of variables, like attitudes, interest, and context, linguistic form of the problem situation, etc. But, the primary school arithmetic had been much better predicted by the quantitative thinking level of the learners The achievement of quantitative thinking of the primary school children, at the concrete operational level is regulated by the logico-arithmetic/spatiotemporal operations. They comprise of logical operations of conservation, categorization and relation functions and infra-logical operations that govern spatio-temporal interactions with the objects, etc. The concrete operational thinker interacts upon the objects/things, etc, that have here-and-now perspective The formal thinker on the other hand, structures his/her thought by acting upon the contents that are of hypothetical and/or of possibility in nature, therefore, such individuals are designated as hypothetico-deductive thinkers also. The Indian children, adolescents/adults had been manifesting delay of 2/3 years in the attainment of the concrete/formal stages (Pachaury 2000) Therefore, it was thought desirable to investigate the development of mathematical thinking in third and fifth grade children of the Bhopal city

Research Questions

Three research questions have been addressed through this exploratory study. They are

(a) What is the level of development of mathematical thinking in third and fifth grade children of the sampled schools of the Bhopal city ?

(b) Do the third and fifth grade sampled subjects differ on the level of development of mathematical thinking?

(c) Is mathematical thinking affected by the gender of the sampled subjects ?

Sample

290 children of third and fifth grades formed the sample of this study. The third graders (72 boys/73 girls) were of 8+ years of age (range 8:2 to 8·7 years), while fifth graders (72 boys/73 girls) were of 11+ years (range 11:4 to 11.IO years). All the children were randomly selected from nine local schools (One girl was extra selected from each grade from one school. Thus, the total sampled subjects were 290 in number).

Measures Used

Collis (1972) constructed tasks that measure the development of mathematical quantitative thinking ability of children, who may be cognizing in concrete/formal situations.

Arithmetical operations of addition, subtraction, multiplication, and division were employed to create these tasks. Each task has a well defined configuration that banks on two dimensions. One being content and the other being structure. Concrete-content dimension refers to intuitable numbers upto 10 or 15 Large numbers that depend on individual conceptual understanding of the numeration system and when they are represented by algebraic notations, the content is referred to be formal. In case the problem is pitched on a series of straight forward operation(s), then this structure is called concrete If the series has to be reconstituted (re-organized) in respect of its effect, the structure is designated to be formal.

Scoring

Each task responded correctly by the subject was assigned a score of one and the incorrect response received a score of zero

Task administration

All the eight tasks were individually administered to the sample subject (Ss).

Results

The administered tasks measure Ss' mathematical thinking at four levels, therefore, the results have been reported in this way. Level I performance: Concrete-content and concrete-structure of the tasks

Tasks (I) 9x2=2x ?

(2) 11-5+5 = ?

On these two tasks, the Ss' performance is given below in percentages:

	Grade	*Tasks*	
III	Boys	58	47
	Girls	51	58
	Combined	54	52
D	Boys	92	67
	Girls	93	66
	Combined	92	66
	% diff III/V (N = 290)	38	14
	P	0 05	NS

For n72/73. Critical value of the Omega statistic is 0.23 at an alpha of 5% level of confidence.

For n145/145, Critical value of the Omega statistic is 0. 16 at an alpha of 5% level of confidence.

It is clear from the above table that the percentages ranged between 51 to 93 on these two tasks by the sampled Ss. By and large, the third graders' (8+ age) performance hinged around 54%. Since, these Ss belong to the initial stage of concrete operational thinking, they deal with the reality in the here-and-now fashion, i.e , in concrete material-sense, therefore, 46% and 48% of them found it difficult to operate on these two tasks, respectively. Ss of the fifth grade (11+ age) were of early formal operational level of thinking, therefore, they showed better performance. However, they too failed to reach the 75% criterion level on task 2 (Piaget, 1952). In order to determine whether there exists any significant difference in the performance of either gender within a grade on the concrete-content and concrete structure level of quantitative thinking ability, the Omega statistics were applied For the either grade gender, there does not exist any significant difference in the percentages on these two tasks, since the obtained values of the Omega were lower than the critical value at an alpha of 5% level of confidence. However, fifth grade children performed significantly better than their younger peers on the first task only.

Level II performance Concrete-content and formal-structure of the tasks Tasks (3) $8-5 = ? - 8$
(4) $(7+3) = (7+2) + (3-?)$

	Grade	Tasks	
III	Boys	17	13
	Girls	10	16
	Combined	13	14
D	Boys	21	19
	Girls	22	16
	Combined	21	18
	% diff III/V	8	4
	P	NS	NS

For this category of the tasks, overall performance of the sampled III/V graders had been quite poor. Neither grade/gender of the Ss reached even 25% level of performance. For the third graders, it was between 10 to 17% only. While for the fifth graders, it was between 16 to 22%. It is obvious that this category of the tasks had proved to be very difficult for these children Grade/gender differences were as well silent on these tasks. The formal-structure of these tasks has severely impeded even fifth graders' performance who otherwise should have been at least early formal thinkers Level III performance: Formal - content and concrete-structure of the tasks Tasks (5) $297+285 - 285 = ?$
(6) $PXQ = q X ?$

	Grade	Tasks	
		5	6
III	Boys	24	44
	Girls	38	44
	Combined	31	44
D	Boys	65	64
	Girls	67	73
	Combined	65	68
	% diff III/V	34	24
	P	0.05	0.05

For the third graders, on this category of tasks performance ranged between 24 to 44%, while for the fifth graders, it was between 31 to 73%. In general, girls of either grade have performed slightly better than their counterparts. However, gender differences within each grade were silent.

Senior peers performance had been significantly better than their juniors on both the tasks

Level IV performance. Formal-content and formal-structure of the tasks

Tasks (7) $389+421= 389+205+421 - ?$
(8) $P-q = 2P- ?$

	Grade	Tasks	
		7	8
III	Boys	20	24
	Girls	27	30
	Combined	23	27
D	Boys	33	40
	Girls	36	32
	Combined	34	36
	% diff III/V	11	9
	P	NS	NS

The range of performance for the third grades had been between 20 to 30% While for the fifth graders, it was between 33 to 40%. As for the III level tasks, on this IV level tasks (7/8) too, the performance of the girls had been slightly better in comparison to that of the boys. However, here also grade/gender differences were silent. Although the fifth grade Ss were 11+ years of age, their performance remained far below the standard achievement of 75% advocated by developmental epistemologist Jean Piaget (1952).

Discussion

On tasks I, II and VI, the sampled fifth grade Ss registered beyond 75% criterion performance However, tasks (III/IV) banking on concrete-content and formal-structure have posed much difficulty. This is also true for tasks VII/VIII that have formal-content as well as formal-structure Piagetian theory postulates that a learner would attain hypothetico-deductive reasoning only when he/she has fully attained concrete operational stage. A delay of one/two years in the attainment of concrete operational stage is reflected in poor performance of the Ss on tasks that reflect either formal content and/or formal structure. Hence, the data show that a delay of 2/3 years occurs clearly on tasks that bank on formal-structure. Two reasons seem to be responsible for this state of affairs irrespective of the mathematics curriculum persued by the students. On being the insistence of the mathematics teachers to apply sincerely algorithmic procedures by the students in doing arithmetic exercises. The second being the poor professional preparation of the teachers to teach mathematics properly. In fact, even in the Kendriya Vidyalayas this observation applies very well, what to say of the local schools. The cook-book methodology forms the core of mathematics learning by the students. Therefore, it is opined that the sampled Ss of the either grade/school have reflected their spontaneous development in negotiating with the tasks situations requiring four levels of mathematical thinking.

Educational implications

To solve the administered types of the tasks, it is desired that handson experiences in multi-context situations form

(a) the movement in thinking, i.e., understanding of the reversibility in operations;

(b) observing/establishing the patterns; and

(c) grasping of conservation principle.

To solve Collis (1972) type of equations, children's attention towards construction of right/left quantities of a given task to arrive at identity of relationships is required. It would be better if the students are allowed to engage 'in statu nascendi' ('to make them rediscover it' - Polya, 1965/ 'equivalence of two sets'). Children should be exposed to learning mathematics by constructing the logical schemes.

Conclusions

In respect of the sampled Ss of the local schools, the following conclusions have been drawn·

(a) On concrete-content/concrete-structure of the tasks, delay of about one year has been observed;

(b) On tasks that bank on formal-structure and/or formal content, delay of about two/three years is registered,

(c) Gender differences are silent within each grade level on all the four levels of tasks; and

(d) Fifth grade Ss performed significantly better than their younger peers on tasks 1, 2, and 6 only.

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Effectiveness of Play-way Technique in Teaching of Science at Upper Primary Stage

An Experimental Study

RAMA K.S.
Sacred Heart Institute
Bangalore

Learning of science and technology in school aims at imbibing scientific temper, questioning spirit and spirit of inquiry. If these have to be achieved, science teaching needs to be experiment oriented and activity-based. This experiment shows the effectiveness of play way technique in teaching science at standard VI

Introduction

The world is changing fast due to development of science and technology. The changes were slow in the beginning but in the twentieth century, it moved with breakneck speed In the past ten years science and technology have made significant contributions towards the solution of basic problems like food, shelter and diseases. Developments have taken place in all the spheres of life. Consequently teaching of science in primary schools, forming the base, should definitely impart the following:

- Preparation for living in the changed and challenging world.
- To face problems scientifically.
- To discover, explore and analyze the systems, which are operating in the environment. It should also develop scientific thinking, outlook, attitude and temper respectively.

All branches of science including chemistry should be taught appropriately Play is one such wonderful tool to teach pupils to learn chemistry It is very essential to teach essential chemistry in upper primary schools as it has all the qualities of empirical science and children can learn easily from their routine activities.

Need for the Study

Rationale

With the introduction of new system of chemistry syllabus at different stages, this subject has undergone tremendous changes The investigator observed that in this subject in primary school, high schools as well as in teachers' training institutes more emphasis was laid on theory than on experimentation. It was also found that the students find it difficult to learn chemistry as it is taught in a very general (traditional) and uninteresting way. Further, textbooks are very comprehensive and the questions framed by the teachers were not of good quality. It covered only knowledge aspect of learning and there was no change for the concept formation or generalization, which are the bases of science teaching As such it was pretty clear that the present method (traditional method) of teaching chemistry is defective and hence ineffective.

In order to get rid of the above-stated problem and also to try to help the classroom teacher and children it became absolutely necessary for the investigator to think of the alternative method(s). This led to the adoption of play way technique of teaching chemistry

Major Objectives of the Project

Objectives

I. To enable children understand basic principles and concepts in chemistry.
2. To develop curiosity among children in learning chemistry and recognize the scientific facts
3 To help children arrive at independent conclusion and to provide opportunity to children for formulating correct rules.
4. To help trainees to think critically.
5 To develop in trainees the skill of handling apparatus.
6. To make trainees analyse an effective method

Design

The investigator is directly involved in teaching in an English medium school, namely, Carmel Convent School. The investigator taught students of both the controlled and the experimental groups and she demonstrated to the trainees how to conduct the classes and undertake project work in Kannada medium schools.

Schools taken for both controlled and experimental groups are. (i) Carmel Convent School (English Medium School), (ii) St. Anthony's Kannada medium primary school

Limitations of the Study

1 It was tried only in Class VI

2. It was tried only in one Kannada and one English medium school.
3. Only one unit was taken
4. More girls were represented in the project
5. It was tested only in urban schools. The project was started on 10 July 1993 and was extended up to 20 July 1993. The total duration was thus of 10 days. The investigator and four trainees took 10 periods both of the controlled and experimental groups simultaneously

The total number of students involved in this project were 240-120 each in controlled and experimental groups All the A sections consisting of 60 students were selected as the controlled group and all the B sections consisting of 60 were considered as experimental group in both Kannada and English medium schools, respectively. They were almost identical in all respect

Procedures

Topic named Composition of Substance was taken from the upper primary school syllabus prescribed for Class VI in chemistry. The topic was further divided into sub-concepts, namely, atom, molecule, structure of an atom, element, symbol, metals, and non-metals, valency, compounds and formulae, respectively. On all these concepts, varieties of objective tests were prepared.

Play Way Technique

In this technique all the lessons were introduced with game; later all the other steps based of the games were developed. All the classes were taken outside Students had to note down their findings after each game which was conducted in groups. Group leader used to read the findings before they could record the same in the books. These were further discussed and clarified by the investigator Then the students were asked to note down these individually in their books. Feedback to the investigator for further work was also given.

Formal Method

It is usual classroom method. Hence investigator also used suitable stories, teaching aids, illustrations and examples; but everything was conducted inside the class only. Students were asked to write from the blackboard. Equal weightage was given to all the areas, namely knowledge, understanding, skill and application After teaching both the groups for 10 days, a test was administered to the students of both groups. The marks obtained by each student were recorded.

<table>
<tr><th>Sl No</th><th>Name of the Lesson</th><th>Controlled Group</th><th>Experimental Group</th></tr>
<tr><td>1</td><td>Atom and Molecules</td><td>Lecture demonstration with teaching aids</td><td>1 Name of the Game Count me and mount me Class VI number of players 5 students in each group.

<i>Purpose.</i> To give a clear picture of atom and molecule <i>Description</i> These players are given similar kinds of beads, same number of mustard and same number of size of salf crystals and they are asked to find out by counting how many pieces of each thing could be kept in an inch. Each group has to count and write the number of different things in an inch on the board and they have to reason out the method they follow.

<table>
<tr><th><i>Group</i></th><th><i>No. of big beads</i></th><th><i>No of salt crystals</i></th><th><i>No. of mustard</i></th></tr>
<tr><td>1</td><td>4</td><td>8</td><td>20</td></tr>
<tr><td>2</td><td>4</td><td>8</td><td>20</td></tr>
<tr><td>3</td><td>4</td><td>8</td><td>20</td></tr>
</table>

Thus they arrive at the conclusion that atom is very small and when 2 or more atom are combined they from molecules</td></tr>
<tr><td></td><td>Structure of an atom</td><td>Puppet Show</td><td>Puppet show is developed into a story

2 <i>Name of the Play:</i> "Read'me and Recognize me" <i>Class</i> VI <i>Purpose :</i> To make the children understand that atom is made up of protons, electrons and also carry positive charge, negative charge and neutral charge, respectively Time 10 minutes.

<i>Number of players:</i> Equal number of players in three groups.

<i>Description.</i> Story is introduced by the teacher and three students repeat the same with puppets in the form of rhyme.

Prakash wears Proton
Eswari wears Electon
Natraj wears Neutron</td></tr>
</table>

Sl No	Name of the Lesson	Controlled Group	Experimental Group
			Then their attention is drawn towards the dress of Prakash, Eswari and Natraj respectively. Further, it will continue for 10 minutes With the help of 'fire on the mountain run run'. Thus, the investigator completes the drill work.
3.	Elements and their symbols	Lecture-cum demonstration with the help of common elements in daily life.	3 *Name of the game.* Bombing the city *Class:* VI, *Time* 20 minutes *Purpose:* To introduce the names of elements *No. of players* Any number *Description:* There are 10 houses They name of each house represents an element They have to repeat the names of the houses and be moving. They the name of any house is called out If they are in that house they will be out. Like this, game continues till all are out After this they play another game to develop the idea about the symbols
4	Rules for writing the sysmbols	Lecture-cum demonstrations with 5 suitable examples	4 *Name of the game:* "Match me and patch me". *Class:* VI, Time 20 minutes. *No. of players:* 10 members in one group *Description* Names of ten elements and their symbols are written on cards The students are asked to pick out the right cards. Each group has to record the same and its symbol and then write it on the black-board. The answers are discussed and corrections are made for the wrong answers immediately
5	Metals and non-metals	Lecture-cum demonstration method with suitable examples	5 *Name of the game:* "Look at me and find me" *Class:* VI, *Purpose.* To make the children understand the rules to observe while writing the symbols and their application in daily life *Time.* 20 minutes, *No. of players:* 10 members in each group *Description:* Common elements are arranged in the form of a chart 1. Name of the elements and its symbol with one letter

Sl No	*Name of the Lesson*	*Controlled Group*	*Experimental Group*
			2 Name of the element, and its symbol with 2 letters 3 Name of element, and its symbol in Latin form The students have to read the names and their symbols and record in their books They have to find out the common things and they must write the rules and logically reason out for writing the rules. Their doubts are cleared by giving correct explanation.
6	Valency	Story telling by using stick figures	6 Metals and non-metals are introduced with small memory test *Name of the game* "Test me and Tell me" *Class.* VI, *Purpose* To help the children to introduce metals and non-metals, *Time* 10 minutes, *No of players* Any number *Description*· 5 metals and 5 non-metals are arranged on the table, they have to touch and identify each item and they have to mention one use of each item.
7.	Compounds and their formulae	Lecture-cum demonstration method	7 *Name of the game* Atoms are at play, *Class* VI (Dramatization) *Purpose* 1. To give clear picture of valence to the students 2 To reinforce the name of elements and their symbols. 3 To give clear idea of compound *Time* 25 minutes, *No of players*· 10 *Description*· Each student is given a role to play Each student is given a role to play Each element is combined with the other element to form a compound. Each stage is simultaneously represented with the stick figures by pair of students on the Planned board. They also observe the number of hands each element has in stick figure also. They lean clearly vallancy and the name of the compounds. Here it is also possible to give variable valence of elements., which will further help the students in future

Sl No	*Name of the Lesson*	*Controlled Group*	*Experimental Group*
8	Rules for writing the chemical formulae	Using the story	8 *Name of the Game:* "Pick me and pain me" *Class:* VI, *Time:* 20 minutes, *No. of players.* Any number *Description:* While enacting the drama stick figures are put on the flannel board with the help of those formulae compounds They have to name the compounds by picking the card and they have to pin against the formula. This is further continued by discussion
9.	Review of lessons	It is done through question and answers and doubts are also clarified	9. *Name of the game.* Look at me and guess me. *Class:* VI, 20 minutes, *Purpose:* To give an idea to write the chemical formulae *No of players:* Any number *Description:* They carefully look at the chart and guess the rule. They write the formulae according to their guesses, form different groups and record their guesses on the board. These are further confirmed in the group discussion by the investigator. Thus they learn correctly the steps for writing the formulae. The revision of the whole unit is done in the form of quiz competition in different groups and doubts are cleared.
10.	Quiz		Quiz is conducted in both controlled and experimental groups through questioning.
11	Post-test		Post-test is given to the two groups to find the effectiveness of both the methods, namely, formal and play way method

Qualitative Presentation and Analysis of Data

The learning outcomes collected by the trainees and teachers while taking up the lessons are as follows:

	Controlled Group	*Experimental Group*
1	All the children were not active	All the children were always very active and curious.
2	At times they were either noisy or passive. They did not ask many questions	There was no problem of discrepancy at any stage of the lesson; children raised many question and got their doubts cleared.

Controlled Group	*Experimental Group*
3 Children were hesitating to give the answers.	Children were very confident in giving the answers.
4 They did not give specific answers	They answered precisely, accurately, logically and with right reasoning
5 They did not show much interest in expressing scienfic factors of rules.	The were extremely happy, enthusiastic in expressing scientific facts and rules They felt as if they were the discoverers
6 They learnt their lessons as routine lessons	They paid special attention for their classes They enjoyed learning very well as they get the chance to play
7 They were not sure of their learning ability	They were sure of their learning ability.
8 They answered only knowledge level questions	They took it as a chillenge to answer all types of questions
9. They could not remember the whole unit well	They could learn the whole unit with the games.
10 Learning was not very meaningful and relevant to them	Learning was relevant and it was meaningful for them
11 Learning was only by questioning	Learning was actual doing, So, it was very effective
12 Even in Quiz after certain stage, they became passive	They were active throughout and they enjoyed the quiz
13 Students did not express anything about the method.	Children expressed liking for the method.
14 They were not involved	All the children were involved.
15. They were not able to discover any concepts.	They were able to discover many concepts spontaneously as it was a goup work

The marks scored in the quiz

English Medium School	*Maximum Marks*
Experimental group	40
Controlled group	28
Kannada Medium School	Maximum Marks
Experimental group	42
Controlled group	30

So it was found that the experimental group scored more marks than the controlled groups Post-test was administered by giving parallel paper of pre-test to avoid the repetition of question paper. Further, it was confirmed by quantitative analysis.

Quantitative Analysis and Interpretation

By comparing the performance of both the groups the investigator discovered that the performance of experimental group was better and that play way technique in teaching chemistry was better than the formal method. The following tables reveal the clear picture of the project.

The percentage of marks scored in the quiz

TABLE 1

English Medium School

Experimental Group		*Pre-test*	*Post-test*
1.	Mean	19.67	54.67
2	Standard Deviation	8.22	12.28
3	Standard Error	1.06	1.59
Controlled Group		*Pre-test*	*Post-test*
1.	Mean	19.5	42.5
2	Standard Deviation	8.4	9.4
3	Standard Error	1.09	1.21
Difference in mean value		=	42.5
t-value calculated form the table for the degree of freedom 60 at 0.01 level		=	2.66
t-value as calculated from the formula is		=	6.55

TABLE 2

Kannada Medium School

Experimental Group		*Pre-test*	*Post-test*
1.	Mean	7.57	47.71
2	Standard Deviation	4.1	7.2
3	Standard Error	0.52	0.93

Controlled Group		Pre-test	Post-test
1	Mean	7 74	39 98
2	Standard Deviation	4 2	5 0
3	Standard Error	0.53	0 77
Difference in the mean value		=	7.73
t-value calculated form the table for the degree of freedom 60 at 0.01 level		=	2.66
t-value calculated from the formula is		=	6.03

The above tables reveal that:

1 The difference in the means of both experimental and controlled groups is 12 17 which is significant.

2 Standard deviation also shows the deviations are not much both the groups.

3. Standard error also does not show much error in sampling.

4 T-value calculated from the formula is 6.55 which is greater than 2.66 (English medium) and t-value calculated from the formule is equal calculated from the formulae is equal to 6.03 and table value is 2.66

5. Both these tables clearly show that the mean difference is significant and real.

Conclusion

Hence it is discovered that play way technique of teaching Science (Chemistry) is superior to formal method.

Suggestions for Further Study

1. It can be verified by more primary school science teacher and teachers training institutes to confirm about the effectiveness of play-way technique of teaching chemistry in primary shcols.
2. It should be tried on a larger sample and also by different sampling methods.
3. It should be tried in rural schools.

Identification of Mistakes in Chemistry at Upper Primary Stage

V P Gupta
Reader
Regional Institute of Education (NCERT)
Ajmer, Rajasthan

This research conducted to identify the mistakes in Chemistry reveals that children need to learn the basic formulae clearly to progress further. This would be an eye opener for teachers of science to find out the bottlenecks in learning science.

Introduction

Science teaching at the elementary stage is generally taking place by following integrated approach. Earlier there used to be different text books of Biology, Chemistry and Physics from Class VI onwards but now there is only one book of science consisting of topics from chemistry, physics and biology and a few topics from environmental science. Efforts are going on by the curriculum framers that different topics related to chemistry, physics and biology are intermingled in such a manner that study of any one science topic imparts the related knowledge of more than one sub-disciplines. For example, while studying the topic of water besides enough knowledge of composition of water, sources of water, properties and use of water, causes of temporary and permanent hardness of water (Chemical aspects), students should be able to learn about the tidal waves, energy obtained from tidal waves (physics) and causes of water pollution and the measures taken for controlling water pollution (chemical and biological aspects). This is a very difficult task and such type of integrated science lessons need to be developed Analysis of Class VI, VII and VIII science books revealed that there are a few topics exclusively of chemistry and similarly there are many topics exclusively of physics and biology There is one such topic on 'Acids, Bases and Salts' in Class VII syllabus This topic includes formulae of different acids, bases and salts and also chemical equations of chemical changes/reactions Students have already learnt about chemical equations in an earlier chapter Symbols and formulae of elements and compounds and representation of chemical changes/reactions by the balanced chemical equations are supposed to be the essentials of learning of chemistry These are as important in chemistry as the knowledge of numerals, numbers and tables in arithmatic

This is language of chemistry. It is observed by the author that many students even after completing their post graduation in chemistry commit mistakes in writing of chemical formulae of substances. It is so because they have not yet learnt the art of writing the formulae of substances on the basis of symbols of elements/radicals and their valencies and charges present on them If one is good in writing of chemical formulae and chemical equations, he/she may be good in chemistry on the whole. It was in this context that the present study was undertaken to identify the types of mistakes committed by students in writing of formulae of students and subsequently find out impact on writing of chemical equations corresponding to different chemical changes and thereupon identify/develop indicators for quality learning of chemistry

NCERT has now produced books in science integrating all the components of General Science and Technology based on the National Curriculum Framework for School Education (NCFSE 2000) This research was carried out before the release of the integrated books. So the chemistry part was analysed separately

Objectives

The present study was conducted keeping the following objectives in view·

1. To identify types of mistakes committed by VII (Pass) class students in writing of chemical formulae of substances,
2. To find out the impact of the above mistakes on writing of chemical equations corresponding to chemical changes/reactions; and
3. To identify indicators for quality learning in chemistry

Methodology

Methodology used for this study consisted of the following:

- Analysis of Textbooks
- Construction of Tool
- Sample Size
- Aministration of Tool and Data collection
- Data Analysis

A brief discussion of each of the above components is given below:

Analysis of Textbooks

Analysis of Science textbooks for Class VI, VII and VIII followed in CBSE affiliated schools were analysed. It was found that the textbooks consisted of a few topics from chemistry Class VII textbook of science consists of five chemistry topics Chapter-II on Elements, Compounds and Mixtures deals with definition and differences between them Symbols of elements and writing of formulae along with representation of chemical changes/reactions by chemical equations are discussed in this chapter. The next chapter on 'Acids, Bases and Salts' and the subsequent chapters find wide use of chemical formulae and chemical equations for representing different molecules and various chemical reactions taking place around us. Hence, one cannot think of learning of chemistry without understanding language of chemistry in the form of symbols, formulae and chemical equations.

Construction of Tool

One tool was constructed in the form of a questionnaire for those students who had passed Class VII. The tool consisted of two questions. First question was on writing of formulae of simple acids like nitric acid, sulphuric acid and bases like sodium hydroxide, calcium hydroxide and the basic oxide-magnesium oxide. All these substances involve monovalent or divalent ions and the chemical formulae can be written easily if one knows the principle of balancing of charge. To test whether the students write chemical formulae by applying this principle or simply by cramming or by gas work, one item on writing the formula of Aluminium sulphate was also kept in the questionnaire Aluminium sulphate consists of trivalent aluminium cation and bivalent sulphate ion. Formula of this substance can be written correctly only by those students who have really understood the principle of writing of formula Thus question number 1 consisted of six sub-items of one mark each Question number 2 related to representation of chemical reactions/changes by chemical equations. All the five chemical reactions were very simple and chosen from the textbook for Class VII Representation of chemical changes by chemical equations can be attempted correctly only by those students who have attained the mastery level of learning in writing of chemical formulae. Thus question number 2 was sequentially related to question number 1. Representation of each chemical change by the balanced chemical equation carried two marks Thus this paper pencil test was for 16 marks (Q.1 for 6 marks and Q.2 for 10 marks). The tool was discussed with concerned teachers of schools and was given the final shape after their satisfaction. Space for writing the answers was left in the questionnaire itself. The tool is given in the Appendix.

Sample Size

Class VIII students who had just passed Class VII examination in May, 2000 constituted the sample size. Two English medium Bhopal based co-education schools affiliated to CBSE were selected for the purpose. All the 200 students of Class VII of the above schools who were present at the time of test constituted the sample. Out of 200 children, 78 were girls and 122 boys in the age group 13-14 years. Their Class VII scores ranged between 40-96 per cent.

Administration of Tool and Data Collection

The tool was administered simultaneously in the five sections of two schools to 200 children with the help of their teachers and the investigator Children were of English medium They were asked to write formulae of six compounds and chemical equations of five chemical changes on the question paper itself Time limit was not set but all the students returned the questionnaire within half an hour. The students were asked not to write their names on the questionnaire to remove the examination phobia

Data Analysis

Item wise analysis in terms of mean scores of girls (N:78), boys (N 122) and all the 200 children is shown in Table 1. Their percent mean scores in writing formulae of substances, representing chemical reactions/changes by chemical equations and the overall percent mean scores are depicted in Fig. 1. Sexwise comparison of learners achievement in chemistry has also been done statistically. Mean scores and S.D. of girls and boys and 't' value are given in Table 3.

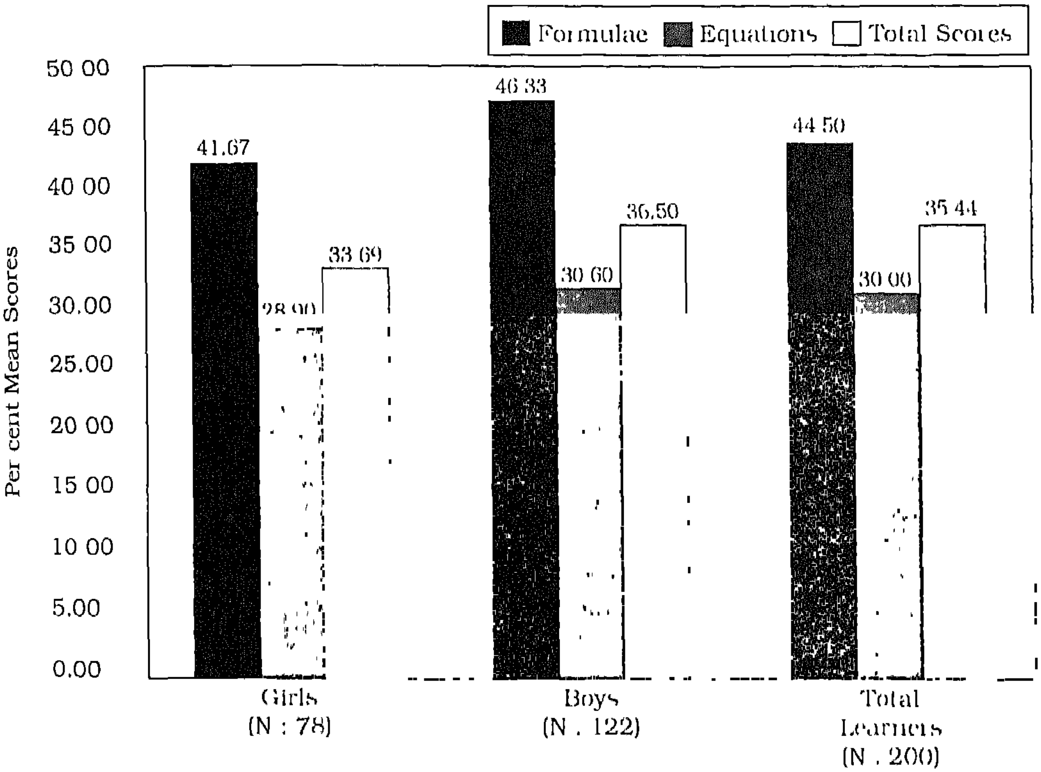

Fig.1: Per cent Mean Score of Learners

Findings

On the basis of the above data analysis, the following conclusions can be drawn First test item in Q 1 was to write the chemical formula of sodium hydroxide. It is clear from Table 1 that mean score of girls in this test items is 0.59 (out of 1 mark) in comparison to 0.56 in case of boys i.e. only 59 per cent of girls and 57 percent of boys could write the formula correctly. Varieties of mistakes were committed by the students. A few of them are Instead of writing NaOH, many of them wrote like NAOH, Na_2Oh, $NaOh_2$, NaH_2O and naoh.

The second item was to write the chemical formula of calcium hydroxide Percent correct responses given by both female and male children decreased in this test item. Only 35 per cent girl children and 39 per cent of boys could attempt this item correctly. In comparison to sodium hydroxide, where both cation and anion are monovalent (Na^+ and OH^+ respectively), in calcium hydroxide, calcium cation is bivalent (Ca^{2+}) whereas hydroxide anion (OH^-) is monovalent. Instead of writing Calcium hydroxide as $Ca(OH)_2$, most of the students wrote it as CaOH Other types of mistakes could also be observed. Some of the students also wrote Calcium hydroxide as CaH_2O, $CaOH_2$, CaO_2H and $Ca(oh)_2$

The third item was on writing of structure of nitric acid 37 percent female and 54 percent male children attempted this item correctly When the students were asked to write the structure of sulphuric acid, to our surprise, percent of correct responses increased from 37 per cent in HNO_3 to 64 per cent in H_2SO_4 in case of girl students. In case of boys, the percent of correct responses increased further to 71 percent This may be due to more practice done by the students for H_2SO_4 There does not seem to be any other plausible explanation for this enhanced score for H_2SO_4 in comparison to HNO_3. This observation is an area of further exploration. HNO_3 and H_2SO_4 were also written as HNO_4, HNO_2, HSO_4, H_2SO, H_2SO_3.

Difficulty level of item on writing the formula of magnesium oxide proved almost the same as that of sodium hydroxide as both involve one cation and one onion of same magnitude of charge (uni+ve & uni–ve om case pf Na^+OH^- and biopositive and binegative in case of $Mg^{2+2-}O$), 55 per cent girsl and 57 per cent bosys could write the correct formular for magnesium oxide Students were also found to write MgO as Mgo_2, Mgo Mago, 2Mgo and Mgo_2

One item of a bit higher order involving application of knowledge was kept purposefully to see the change in scores in such an item. This item was on writing the formula o aluminum sulphate. To our great surprise, out of 200 not even a single student could write the formula of Aluminium sulphate correctly. Though a few of them attempted but they wrote like $AlSO_4$ and Al_2So_4

On pooling the average mean scores of the items on writing of structures of different acidic and basic substance, the average mean score of female students was found as 2.5 in comparison to 2.78 for ale children otu of 6 marks i.e. 41.67

TABLE 1
Item wise Mean Scores of Learners of Class VIII

[illegible]	[illegible]	[illegible]							[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	Nitric acid	[illegible]	[illegible]	Aluminium Sulphate	Total Score	CO_2 with $Ca(OH)_2$	Zinc with HCl	CuO with H_2SO_4	NaOH with HNO_3	MgO with Water	Total with	Grand Total Score
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(6)	(2)	(2)	(2)	(2)	(2)	(10)	(16)
							[illegible]								
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.55	0.00	.50	0.47	0.55	0.61	0.37	0.57	2.59	5.39
	[illegible]	0.56	[illegible]	0.54	0.71	0.57	0.00	2.78	0.43	0.70	0.72	0.55	0.63	3.06	5.84
	[illegible]	0.57	0.58	0.69	0.56	0.00	2.67	0.15	0.66	0.65	0.50	0.72	3.00	5.67	

per cent of girls and 46.23 per cent of boys could write the chemical formulae of compounds correctly. On the whole, 44 50 per cent students attempted Q 1.correctly hence, there is a strong need for laying ore emphasis on clarifying the principle of writing chemical formulae of substances. Students were found committing many mistakes in writing formulae of the compounds as mentioned earlier. All such mistakes are given in Table 2.

Q II was on representing various chemical changes/reactions with the help of chemical equations For writing chemical equations, knowledge of symbols, Valencies and formulae of substance is essential Essential knowledge means mastery level of learning of writing of formulae of substance of daily use. Incomplete knowledge of formulae will not serve the purpose rather scores in such items related to hemical equations of chemical changes/reactions are bound to decrease Q. II consisted of five items related to writing of chemical equations of the five simple chemical changes. Each to writing of chemcial equations of the five simple chemical changes. Each item was allotted two marks.

First items of Q.II was related to writing the chemical equation of the change when CO_2 gas is passed through time water. Only 23.5 per cent girls and 22.5 per cent boys could represent this change correctly When they were asked to write the equation corresponding to the reaction fo zinc metal with hydrochloric acid, 29 per cent girls and 35 percent boys were found attempting this item correctly. However, 30 5% female children wrote the chemical equation corresponding to the reaction of $CaCO_3$ with H_2SO_4 correctly in comparison to 36 per cent of male children Neutralisation reaction between sodium hydroxide and nitric acid was attempted correctly only by 18.5% of girls in comparison to 29 per cent of boys. When girl children were asked to write the chemical equation between MgO and H_2O, 43 5 per cent of them succeeded in comparison to only 31 5 per cent of boys

Learning level of children in question II related to writing of chemical equations was found poor. Their mean score was found as 30.0 per cent in comparison to 53.4 per cent in question I. Broadly speaking, there seems to be a correlation between knowledge of writing of formulae and writing of chemical equations. learning level of children in items related to formulae, chemical equations and overall learning is represented in Fig. 1 with the help of bar diagrams from which it is amply clear that if one is good in writing the correct formulae of substances then one can be good in writing of chemical equations and learning other aspects of chemistry also. Thus chemical formulae and chemical equations are the indicators of quality learning of chemistry at the elementary stage.

Sexwise learners' achievement in chemistry is compared statistically in terms of mean scores. S.D. and 't' value as shoen in Table 3. From the Table, it is clear that though the mean score of male children is slightly better than that of their girls counterparts but there is

TABLE 2
Mistakes committed by Students

Sl. No	*Name of the compound*	*Correct Formuale*	*Wrong Formulae written by students*
1.	Sodium hydroxide	NaOH	NaHO, $NaOH_2$, NAOH, Naoh, naOh
2	Calcium hydroxide	$Ca(OH)_2$	CaOH, .(CaOH)2, CaOHO CaO_2H, Ca_2OH, $Ca(OH)_2$, Ca(oh)2
3	Nitric acid	HNO_3	HnO_3, HNO_2, HO_3N
4.	Sulphuric acid	H_2SO_4	H_2S_1O, H_2So_4, HSO_4, H_2SO_4
5	Magnesium oxide	MgO	2MgO, Mg_2O, MgO_2, $(MgO)_2$, $(MgO)_2$.
6	Aluminium Sulphate	$Al_2(SO_4)_3$	$AlSO_1$, Al_2SO_4, $Al(SO_4)$
7	Zinc	Zn	ZN, zN
8.	Calcium carbonate	$CaCO_3$	$CaCO_2$, CaC, $Ca(CO_3)_2$
9.	Sodium nitrate	$NaNO_3$	$NANO_3$, $NaNO_2$, NaN_3O
10	Lime water	$Ca(OH)_2$	$2CaCO_2$, CaO_2H, $CaOH_2$, CaO, $CaCO_3$
11.	Zinc chloride	$ZnCl_2$	Zncl, $ZNCl_2$, $ZNcl_2$
12	Calcium sulphate	$CaSO_4$,	CasS, $CaSO_2$, $CasSo_3$, $CaSO_4$

no significant difference in the learning level of the two groups as shown by their 't' value which is of the order of 0.32 which is much lower than the Table 't' value of the order of 2.60 at 0.01 level for df = 198.

Implications

As mentioned earlier, symbols and formulae of substances and writing of chemical equations constitute language of chemistry Chemistry learning becomes interesting if one learns to write formulae of substances. Formulae and equations cannot be written without the thorough knowledge of symbols of elements/radicals and their valencies. Hence, there is a strong need of laying

TABLE 3
Sex wise Comparison of Learning Achievement level of Children Studying in Class VII

Sl. No.	*Sex*	*n*	*M*	*S D*	*'t' Value*	*Inference*
1	Girls	78	5.39	5.45	0.32	NS
2	Boys	122	5.84	6.50		

Table 't' value. 2.60, $p < .01$ for df: 198
NS: Not significant

emphasis by teachers to make their students understand and apply the principle of writing of chemical formulae. Students have been found committing mistaks in writing formulae of substances as depicted as depicted in Table 2. Students attention is to be invited by the teachers to avoid such mistakes After discussion in detail the principle of writing of formulae of substances, students, may be asked to practise writing chemical formulae of substances like NaOH, KOH, Mg (OH_2), $Ca(OH)_2$, $Ba(OH)_2$, $Fe(OH)_3$, $MgCO_3$, $ZnCO_3$, $CaSO_4$, $ZnSO_4$, Na_2SO_4, K_2SO_4, $Cr_2 (SO_4)_3$, $Al_2(SO_4)_3$, HCl, H_2SO_4, HNO_3 etc but with understanding There can be an endless chain of compounds but more important is to understand the principle of writing of a chemical formula on the basis of (i) symbols (ii) valencies and (iii) balancing of electrical charges present on ions rather than cramming the formulae. Teachers teaching science at the elementary stage are advised to discuss these topics on chemical fomulae and chemical equation with children in detail and avoid the msitakes committed by them.

Instructional Media and Primary School Teachers

P. Ponnusamy
Lecturer
M. Natesan
Senior Lecturer
District Institute of Education and Training (DIET)
Thirumuthu Nagar 642 112
Coimbatore Dt Tamil Nadu

Use of instructional media in classroom enriches learning experiences of children. Since this is an age of science and technology, the present day teachers must know to use various media and instructional materials in the classroom environment. The present study is an attempt to measure the frequency of use of different media by teachers of primary and upper primary schools

In this age of science and technology, we can see the influence of media everywhere. We have seen the influence of media in the education . This media influence in education helps teachers and students to make changes in their skills and attitude. It also helps them to change from the traditional teaching methods. Radio, Audiotapes, TV, Newspapers, Bulletin board, Posters, Photographs, and Models are some media that our school teachers may utilize in their classrooms. But all the above cannot prove good and fit for every situation. So, to have a right selection, teachers must have a thorough understanding on the usability of these media. Through proper selection and utilizations, teachers can remove many of the obstacles for effective teaching and learning processes.

Many researches have shown that instructional media help learners to learn faster and remember longer. While utilizing the appropriate instructional media in the classroom, teaching will become real, arouse and sustain interest, keep attention of the learner. It also stimulates and motivates the thinking and action of the learner So, the teachers of modern era must know the appropriate use of various media and materials in the classroom.

Generally there is a feeling that primary school teachers do not use media in their classroom. Some of them utilize the materials and media a few times in a week or once a week Few of them utilize a few times in a month or once a month. In this background, the present study was planned to measure the frequency of use of different media by the teachers of primary and upper primary schools

Objective

To find out the percentage of primary and upper primary school teachers utilizing media in their classroom activities

Method

Sample

For this study altogether 103 teachers were selected as the sample from 20 different schools of Coimbatore district of Tamilnadu Among them, 53 were primary school teachers and the remaining 50 were upper primary school teachers.

Tool

The 'Media Utilization Inventory' was used for data collection. The inventory was used to measure the frequency use of ten different media: Bulletin board, Posters, Transparencies, Slides, Photographs, Models, Radio, Audiotapes, Educational Television and Newspapers.

TABLE 1

Number of Primary School Teachers Using Different Instructional Media

(N=53)

Medium	*Frequency of use*					
	Never	*Once a Month*	*Few Times in a Month*	*Once a Week*	*Few Times a Week*	*Every Day*
Bulletin Board	40	1	0	4	2	6
Posters	8	4	10	13	9	9
Transparencies	49	2	0	2	0	0
Slides	45	4	1	1	2	0
Photographs	15	8	12	4	9	5
Models	1	2	5	3	9	33
Radio	8	5	3	18	7	12
Audiotapes	28	8	5	7	3	2
TV	46	1	2	0	1	3
Newspaper	12	0	0	1	7	33

It is reflected from the Table 1 that

1. 75.47 % of the primary teachers were never utilizing the bulletin board
2. 92 45% of the primary teachers were never utilizing transparencies
3. 84.91% of the primary teachers were never utilizing slides
4. 52.83% of the primary teachers were never utilizing the audiotapes
5. 86.79% of the primary teachers were never utilizing TV set and
6. 62.26% of them were utilizing the models and newspapers

TABLE 2

Number of Upper Primary Teachers Using Different Instructional Media (N=50)

Medium	*Frequency of use*					
	Never	*Once a Month*	*Few Times in a Month*	*Once a Week*	*Few Times a Week*	*Every Day*
Bulletin Board	33	2	0	2	0	13
Posters	16	7	8	3	12	4
Transparencies	33	15	1	0	0	1
Slides	25	8	3	3	8	3
Photographs	9	4	11	4	12	10
Models	2	1	1	3	16	27
Radio	10	3	6	4	14	13
Audiotapes	27	4	4	10	4	1
TV	34	1	7	4	1	3
Newspaper	7	2	1	1	4	35

Table 2 indicates that

1. 66 % of the upper primary teachers were never utilizing the bulletin board
2. 66% of the upper primary teachers were never utilizing transparencies
3. 50% of the upper primary teachers were never utilizing slides
4. 54% of the upper primary teachers were never utilizing the audiotapes
5. 68% of the upper primary teachers were never utilizing TV set
6. 54% of the upper primary teachers were utilizing models daily in their classes
7. 70% of the upper primary teachers were utilizing newspapers daily in their classes

Most of the primary school teachers were not utilizing bulletin board, transparencies slides audiotapes and TV in their schools. But, most of them were utilizing models and newspapers in their classroom activities.

There should be a proper training for teachers to use the media in enriching the classroom activities.

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THE LEARNERS' PROFILE

Learners are not passive objects. They are active and inquisitive persons. It is not that only the environment shapes them, rather they too shape the environment to a great extent The learners do not come to school with a blank mind but with pre-conceived ideas Their classroom experiences are interpreted in the context of these pre-conceived notions. Thus, the prior experiences, beliefs and emotions affect the individual's perception and interpretation of events This knowledge acquisition is a constructive or generative process and each student's knowledge is personal and unique (Page 41-42)

National Curriculum Framework for School Education-2000

Realigning Education for Employment

Role of Primary Schools

KIRAN SONI GUPTA
Commissioner
Command Area Development and Colonisation
Bikaner, Rajasthan

Education needs to address the social needs and should enable the individual to make a living on his own The author here stresses the need for providing effective vocational education from primary stage so as to make the young generation help themselves and the growth of the country

THE policy of human resources has already become a centre of all decisions with deep rooted implications The hydra-headed monster of teeming unemployed millions has put our planners, policy-makers and administrators into a dilemma. The contradiction between the increased education and increased unemployment is thus explicit.

The main challenge confronting education strategies in the Indian state of Rajasthan is the education of the girl child, especially among Scheduled Tribes and Scheduled Castes.

Modern education, as defined in Lord Macaulary's Minute on Education, appears to have started in Rajasthan in the middle of the 19th century, although the tradition of public education dates back to the medieval period. English medium and "modern" schools were first introduced in Alwar and Bharatpur in 1842 in Jaipur and in 1863 in Udaipur. Efforts to introduce modern education in Ajmer-Mewar area began in 1819. The provision of education varied among princely states depending upon the orientation of rulers and the availability of financial resources. Jaipur state was at the forefront of modern education in Rajashan wherein 1844 the Department of Public Instruction had been established. Under the auspices of the Maharaja Sawai Ram Singh Bahadur, a Sanskrit college and schools for boys and girls were opened. The education scenario in smaller states, e.g. Bundi, Dholpur, Shahpura, Banswara, Pratapgarh and Dungarpur, was very different. In Bundi and Bikaner, for example, schools were limited to Sanskrit/persian schools and *Chatshala/Pathshalas* respectively. Education in medieval Rajasthan was, therefore, based on patronage, either by the royalty or by influential members of the local community. While it did affirm the key role of public provisioning of education, its sphere was limited both in terms of the area covered and the skills taught as the students (and teachers) were mainly either from the royal or noble househoIeds or were "beneficiaries" of occasional munificence

In general, girls' education was considered unimportant and suffered from conservative social attitude and practices, as well as from a lack of female teachers Even by the 1930s, the situation was not much better, with girls schools accounting for approximately only 10 per cent of the total number of schools in Jaipur state.

While in 1949, at the time of the formation of the state, the total number of primary schools was 3,195 (2, 864 for boys and 331 for girls), by 1981 it was 23, 125, and this grew to 39, 335 by 1991. During the Eighth Plan period (1991 to 1996), the number of primary schools increased by 13 per cent and upper primary schools by 32 per cent, resulting in a total increase of 17 per cent

The improvement in literacy rate recorded by Rajasthan between 1991 and 2001 is the highest in India. Literacy levels in the state rose from 38.6 per cent to 61.03 per cent, with literacy rate for males moving from 54 99 per cent to 76 46 per cent and for females from 20 44 to 44.34 per cent. Despite the high decadal growth rate, the challenge of Education for All (EFA) is still substantial especially for rural areas, among girls, Scheduled Castes and Scheduled Tribes. Thus the education scenario is doubly constrained· not only is the achievement level relatively low in absolute terms, but also its distribution across social groups is highly uneven.

The overall enrolment rate in schools for the age group of five to fourteen years in Rajasthan was estimated in 1998-99 at 67.6 per cent. The enrolment for boys is estimated at 85 per cent, while girls still lag far behind at 48 percent.

In Rajashtan several major programmes have been introduced over the years to improve the formal education system, and/or to facilitate access to education. These are:

- Non-formal Education Programme
- Shiksha Karmi Project
- Lok Jumbish Pariyojana
- Rajiv Gandhi Swarna Jayanti Pathshalas
- District Primary Education Programme (DPEP)

One of the most daunting task facing the ninth Plan is to accelerate the growth of employment opportunities to absorb this increase in labour force. The emerging structure of employment has numerous problems such as high level of underemployment, increasing casualisation, emergence of low productive jobs and underutilisation of educated persons. Many states are likely to face the prospect of increase in unemployment in the post Ninth Plan period (2002-2007) are Bihar, Rajasthan, U P Kerala and Punjab. Rajasthan and U.P. are the States where labour force and employment growth different widens more than in the Ninth Plan Under the Ninth Plan the government has envisaged an increase in labour force of upto 450 million. It also plans to provide employment to 443.6 million workforce during the same period

To raise employment and diminish inequality is the major objective against which the success and failure of any educational system is measured. Fitting people for emplyment is the basic responsibility of the education system for not only to get foot hold in life, but it is the most important consumer expectation which can no further be ignored.

It is employment (including self-employment) alone which assigns an individual a specific place in the economy and enables him to contribute effectively. The optimum utilisation of human resources through appropriate employment should be a matter of deep concern for one and all.

Education has had a very beneficial impact in moderating the growth in population. It has also led to increased awareness in the common man. Although education often tends to raise aspirations, it is argued that job expectations have by and large remained realistic in Rajasthan. Education has had a deleterious effect on the employment situation, but its exact extent has not been ascertained

Education in Rajasthan has led to the tendency to inclulcate preferences for white-collar jobs The centuries old taboos associated with manual labour are persisting throughout the country. It is socially 'Infra-dig' for an educated individual to take to any kind of manual tasks like a mechanic or a skilled technical in various fields of today Manual labour has become associated with social stigma and, therefore, the resultant aversion to certain jobs propels the increasing educated masses to particular sectors of economy

Secondly, education accounts for the high level migration both intercountry and intra-country. It has also added to urban labour force by encouraging the migration from rural areas to the urban. This tendency is more marked in the educated masses and has repercussion on standards of living, provision of ecuation, medical and welfare services.

Therefore, it is highly imperative that differences in education and economic structure which can alter the balance of advantages and disadvantages of domestic developments with repercussions on national economy, should be narrowed down. The first step should be to relate our present day educational system to the employment situation.

It is a well understood fact that there is highly important correlation between education and employment and their relation is doubtlessly more complex than the simple causal relation. The growth of national economy depends on the number of productive workers and the increase in labour productivity, which in turn is dependent on variables like level of technology and eduction and qualification of the workers. The specific responsibility of education towards the employment situation is three-fold employment preparation, employment adaption and employment cration to a limited extent.

The effectiveness of eduction requires a deep study of questions related to planning, the role of specialists in the national economy and the training of specialists as well as their actual employment in the economy which determines the effectiveness of education Secondly, the present developments in science and technology make it necessary to prepare long-term plans for development of all types of education (secondary, general, technical, professional)

The social development prospects for the next decade require us to define the quantitative and qualitative problems which beginning right now should be solved in the areas of education in order to prepare the young and the active population for the future. Thirdly, there is a need for greater emphasis on technical and vocational aspects of education in place of the present accent on general education, which pushes the educated from rural areas to migrate to the cities.

Fourthly, there is a need to move away form thinking of education as an autonomous sector and locating it in the larger agenda of social transformation. Good education can not be mono-sectoral It has to focus on knowledge, attitudes and skills, conscentise and instil pride in self and cultural heritage, prepare and motivate people for self-generated change.

The habit of hinking education only in terms of financial allocation and quantitative expansion should be given up. What matters most is the quality and relevance rather than the quantitative targets. Eduction, in fact, is a game of inter-play of mind, intelect and vision where the educted ones are expected to respond to the 'inner calls' of the ever-demanding, enterprising spirit of their own.

Lastly, the question of making general eduction universal and compulsory should keep in view the expansion of secondary and advanced eduction in relation to absorption on the graduates into the job market

The question shoots back whether the short run unfortunate effects have been or will be off-set by long-term gain through education's contribution to the process of economic development and growth Experience has shown that the contribution of education to aggregate growth may help to illuminate one corner but only one corner of the wider fuller picture.

A feeling is now there that though education is in a priority sector which ought to be stimulated, yet cannot be expanded indefinitely as it already faces the risk of unemployment of educated individuals who meeting with frustration, create pools of dissatisfaction apart from its implications in terms of investments lying or being under utilised A good education system is not enough to compensate for the inadequacies and impossibilities in the job market The first step must not be confused with the journey's end, and the first aid should not be confused with proper medical aid

The State of Rajasthan holds a good promise to create a balance between education and employment. There is large reserve of unexploited natural resources minerals. It has large effective demand, satisfied partially through imports, but capable of being met indigenously, largely through the development of know-how and there is potential demand progressively becoming effective with the economic growth. The present situation presents many opportunities and challenges which call for initiative, drive, resourcefulness and an inquiring mind; an adventurous spirit, a co-operative attitude and leadership qualities which can be developed only through appropriate educational methodologies.

The primary school should pave way for a strong element of vocational education at the upper primary level. Depending on the local needs and availability of sources and resources, the education at upper primary and secondary level could solve the problem of unemployment

Research Perspective in Teacher Education

S.K. Yadav
Reader
Department of Teacher Education and Extension
National Council of Educational Research and Training
New Delhi 110 016

This paper takes a stock of educational research in India and stresses the need to improve the quality of research. It also presents the sad state of the utilisation of research findings in policy formulations and by groups for whom the research was targeted Dissemination of research findings in a larger scale could improve the utility of researches in education.

Research is a sine qua non of progress in any of human endeovour. Its contribution lies in generating a body of knowledge for designing functionally effective progreamme of action in seraching solutions to the professional problems encountered in implementing the designed programme or activities. The research, whatever be it long term perspective or immediate focus in ultimate analysis, enriches the operating area. Any system or desirous of improving itself undertakes a search into what it has, what it needs to have and how the gaps could be bridgged?.

Educational research in India is relatively a recent phenomenen of post independent period. The first depertment of education was started in 1917 in Calcutta University and the first degree solely based on dissertation was awarded by Bombay University in 1936 and the first Doctor of Education was awarded in 1943 by the same university. It is only after independence, most of the universities introduced programme in education gradually picked momentum. However, researches in the areas of teacher education reflected a very slow progress.

Status of Research in Teacher Education

The first effort to take stock of educational research was attempted by National Council of Educational Research and Training (NCERT) in the forms of bringing out the third Year book of education by focusing on review of educational research including researches related to teacher education in 1968. (Adaval 1968) Most studies were dissertation submitted for master's degree of various universities. Later on under the editorship of M B. Buch in 1974 the first survey of educational research in India was carried out and later on three surveys were brought out in 1979, 1987 & 1991. By now the publications of surveys of researches from time to time has been institutionalised at NCERT level with the publications of the fifth survey carried out from 1988 to 1993 and work on sixth survey covering the researches carried out between 1993 to 2000 is in progress.

The analysis of studies reviewed by various surveys in India delineates that though there has been an increasing trend in the number of researches conducted in relation to teacher education, the percentage of these researches as compared to overall researches is not encouraching

Besides the above Indian Educational Abstracts are published every six month by NCERT 1963 research studies are reported in these abstracts. Educational Consultant India Ltd. brought out two volumes on researches carried out on DPEP interventions from 1994-2002. 471 research studies are reported and out of which 60 are on teacher education.

TABLE 1
Researches Conducted in Education and Teacher Education

	Total Number of Researches in Education	*Number and percentage of researches in teacher education*
First Survey of Research in Education (upto 1972)	731	46 (6 31%)
Second Survey of Research in Education (1972-78)	839	62 (7 39%)
Third Survey of Research in Education (1978-83)	1481	121 (3 17%)
Fourth Survey of Research in Education (1983-88)	1674	145 (8 66%)
Fifth Survey of Educational Education (1988-92)	1831	105 (5 74%)
DPEP Research Studies (1994-2002)	471	60 (12 7%)

A synoptic overview of the nature of the reviews of studies in the area of teacher education revealed the following.

- As many as 479 studies are conducted by various institutions on teacher education reported by five Educational Surveys completed by Buch (1974,1979, 1987, 1991) & NCERT, (1997). Most of the findings of these research studies were not taken into consideration in formulation of teacher education policies for its improvement. These studies remain mostly academic in nature. Efforts should be made to share and disseminate the findings of studies to the policy makers
- The new structure of teacher education was set up in the light of NPE, 1986 in the country. The new institutions like Institutes of Advanced Studies in Education (IASEs), Colleges of Teacher Education (CTEs) and District Institute of Education and Training (DIETs) were established under centrally sponsored scheme of teacher education. The State Institute of Education/State Council of Educational Research and Training (SIEs)/SCERTs) and University Departments were also recommended to be strengthened. But research component still continues to be the weakest area of their operation. Many research and evaluation studies on the functioning and operationalisation particularly on DIETs supported this view (NCERT, 2000, NIEPA, 2001, Yadav, 2000). Therefore, there is need to develop the capacities of these institutions for conducting more researches with a view to provide feedback for improving the quality of education.
- There are some studies conducted on the functioning of DIETs but studies on the functioning of IASEs, CTEs and SCERTs are less in number. The researches need to be conducted on these institutions with a view to provide feedback for improving their functioning
- The Programme of Mass Orientation for School Teachers (PMOST) and Special Orientation Programme for Primary Teachers (SOPT) programme for teachers were launched in the country as one of the components of centrally sponsored scheme of teacher education. These programmes were evaluated by different studies. In their studies Kundu (1989), Bhattacharjee (1989), Rao (1998), Gupta (2000) & Yadav (2002) found that teachers gained in their knowledge in terms of academic awareness, transfer of training to classroom practices of teachers. However, these studies reflected on inadequacies of physical facilities non-availability of training material intime and absence media support at training centres. These programmes need more researches to verify the findings before generalisation and revising the scheme.
- The focus on decentralised planning and management has made significantly in District Primary Education Programme (DPEP) project. Lot of efforts to link teacher

training with school processes and classroom practices have been made Many projects on teacher education were undertaken under this project and evaluation was mostly done by state authorities. The studies covered areas like training needs, improving competency, teacher policies, status of teachers, teacher effectiveness intervention areas for improving teaching, effective classroom transaction, teacher knowledge of content and pedagogy, teacher absenteeism, etc. Though all these studies have been conducted with full financial assistance by the programme yet the research component has not been institutionalised and national level studies are scanty in nature.

- Due to interventions of District Primary Education Programme (DPEP) project, many researches have been undertaken at primary stage but very few researches at pre-primary, upper primary and secondary levels. More researches are needed to be undertaken at these stages.

  The training structure at block and cluster level have been created under DPEP project. The remaining blocks and clusters are being covered under Sarva Shiksha Abhiyan (SSA) programme. The monthly meeting and training programmes are organised in these institutions Some studies have reflected that these are not performing their role as perceived. Proper linkages are not established with DIETs. Therefore, more researches are required to improve their functioning

- In the country, two models on teacher education are mostly followed One is general course on teacher education in which academic courses are followed by professional courses. The other one is integrated programme on teacher education in which both academic and professional course are integrated The researches in this area is very few The researches need to be conducted to see the effectiveness of teachers emerging from these two models.
- The curriculum for teacher education from pre-primary to higher secondary levels has been revised from time to time for meeting the changing needs of the society But curriculum is revised mostly on an adhoc basis in the absence of research support. The curricular areas are added and deleted on the basis of experts opinions or the recommendations of committees All these happens without considering the research findings. Therefore, teacher education curriculum need to be constructed on the basis of research findings so that it can be synchronized with the requirement of school curriculum
- The practice teaching should be the central 'focus for researcher concerned with quality of teacher education. But very few research studies have been conducted in this area. The teaching practices are completed hurriedly and not taken seriously. The lesson plans are not

prepared and supervised properly and feedback is not provided to students so effective for improvement There is lack of cooperation and coordination between training college and practicing schools. Some time school authorities reported that such programme disturbed the school routine (Yadav, 2000) This area needs more number of researches for evaluating all dimensions of practice teaching

- Realising that the duration of one year B Ed. programme is not adequate and it is more theoretical in nature and the internship is not adequately undertaken, two year B.Ed. programme on experimental basis is being undertaken, in four Regional Institutes of Education (RIEs) of NCERT and Gujarat Vidyapeeth, Ahmedabad. The evaluation study on different components of two year B.Ed. course needs to be undertaken
- In-service education enhances the capability and competency of teachers but this area has not been given adequate attention by researchers (Yadav, 2002) The programmes were not orgaised on need based All the teachers were not given equal opportunities. More researches covering all components of in-service education have to be undertaken.
- Due to the impact of globalization, liberalisation and privatisation the role of teacher is changing Such studies are not available. There is a need to have studies on teachers' role in their functions and task in changing scenerio of society These researches may give directions for defining the role of teachers.
- Many studies on qualities of teachers were undertaken. these studies were related to attitude towards teaching, professional competence and knowledge, classroom management, interpersonal relations with students, colleagues and superiors, institutional facilities, problems faced by teachers and teacher educators. The findings of these studies revealed that majority of teachers have adopted teaching career due to compulsion than preference They do not have favourable attitude towards teaching profession. These have implications for teacher education. More researches are required to study this aspect.
- Army of para teachers are recruited in the both formal and non-formal system of education. They are mostly unqualified, untrained and low paid. There is urgent need to conduct researches on para teachers so that permanent policy of their professional development can be formulated.
- Most of the research studies conducted by the researchers and institutions are quantitative in nature and rigorous statistical design and techniques are used. Very few researches are conducted by using qualitative methods. The qualitative studies to be promoted for arriving in more meaningful results.

IGNOU has launched the teacher education programme through distance mode for the north eastern states The impact of this programme may be studied The findings may be used for formulating policies both for pre and in-service education programmes.

There are many schools functioning with two or three teachers teaching in a multigrade situation. There is a need to conduct researches on multigrade situation so that input in teacher education programme both in-service and pre-service can be included in a scientific way

Information and communication technology (ICT) is considered essential for a knowledge society The use of ICT including radio, television, computers etc. provide opportunities to institutions for sharing resources through networking. The organization of training for teachers through teleconferencing has increased the effectiveness of the programme (NCERT, 1996). There is a need to conduct more researches to study the effectiveness of ICT in terms of coverage and quality for various teacher education progrqamme.

Follow up studies increase the effectiveness of the training programmes. Very few attempts have been made to undertake follow up studies both pre and in-service teacher education. Yadav (2000) reported that follow up studies on in-service education contributes to the development and sustenance of professional competencies of teachers The researchers attention is required for such studies.

Research Utilisation

Research findings provide lessons and guidelines for programmes/activities to learn from It enables to identify the strengths, weaknesses and gaps and provide useful lesson to improve upon. It may so happen that the number of studies conducted may be far more than the reported ones Number of conducted researches is very important Equally important is the proper and adequate utilisation of research findings. In practice majority of the researches are either under utilised or unutilised.

In order to have effective utilisation of research results/findings, the following steps may be considered.

- *Research transformation* : Development of a policy and practice relevant state of the art summation of scientific findings based not only on a review of the literature but also the feedback of professionals working in the area of elementary and teacher education.
- *Dissemination* : Research results are seldom used by practitioners and policy planners because (a) the results seldom reach them, (b) if these do so, they are not read; c) even if read, they are seldom intelligible. For flow of research results from researches to practitioners and policy planners there is need that the research results should be transformed into simple and understandable language and should be disseminated regularly through research journals or bulletins.

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An Experiment with Role-playing Technique to Understand Future Changes in the Educational Scenario by In-service Primary Teachers

LALIT KISHORE
Senior Co-ordinator, Bodh Shiksha Samiti
AA-1, Anita Colony, Bajaj Nagar
Jaipur

Training of teachers needs to be a regular feature for making them aware of latest developments and equiping them with newer practices and technologies for quality improvement in education. This experiment with role-play technique to train primary teachers describes the effect of the innovative technique. Active participation by every participant makes the task much interesting.

Introduction

Some attention is being paid to the role-play method in inservice teacher trainings under various Education for All (EFA) projects in various States, According to Klein (1978), role-playing is a technique which allows members of a group to use interactional process analysis to reconsider the issues involved in common problems. In role plays, better clarification takes place due to the explicit demostration and analysis of the facts and values which govern the behaviour of people in interaction through role-play Jinks (1979) maintains that the role play method of training is useful for inducting social skills and preferred insights since it provides social encounters afresh regarding one's behaviour. Klein (1978) further says that in its simplest form, a role-playing situation is afforded by choosing a common problem and placing oneself as a participant in the problem-solving situation. The role-play as a training device is used for various reasons as given below.

- To clarify the issues at stake in a situation.
- To train people to perform a role more effectively
- To relieve participants of the experiences that worry them.
- To know the facts, views and values of participants

As role-playing situation can be systematised by making it to pass through three stages, i e., self-expression, clarification and training in performance The views and issues raised during role-playing can lead to proposals for action. The technique of role-playing can be illuminative since it affords an opportunity for social empathy also

Methodology

A group of primary teachers (N=40, M=30, F=10, Age range=30 to 50 years, Average age=42, Average teaching experience=20 years, working in Government Primary Schools of Jaipur city in Rajasthan State) worked as the sample for the experiment in the use of role-playing as a training technique under Janshala Programme—a Joint UN Agency Project to improve the quality of primary education. (GOR, 1998). The participant teachers were divided into three equal random groups to enact the role-plays on the topics (a) Education in olden times; (b) Education in the present times; (c) Education in the future (10 years hence).

Each group was given 30 minutes to prepare the role-plays and 10 minutes each to enact it. The facilitator after the play raised the following questions: (i)

TABLE 1
Qualitative data in the form of participants' responses

Methodological advantages	*Commonality*	*Challenges*
• Working together, collectivity • Exchange of views • Consensus building • Clarification seeking • Changes of levels of abstaction • Dialoguing • Co-ordination skills • Cross-checking fact • Logic • Teamwork • Deeper understanding	• Issue of inter-relation between the teacher and learner • Issue of active-participation of learners in the process of learning	• Use of technology and new roles of the teacher • Shift towards self-learning • Creation of opportunities for breaking social isolation due to technology and individualisations.

TABLE 2
Reactions of the participants towards role-play as a training device

Reaction	*frequency* Observed	Expected	*Chi-saquare*
Favourable	26	20	
Neutral	8	20	18.8**
Unfavourable	6	20	

** significant at 0.01 level (d f = 20)

How did you feel while preparing and enacting the role-play? (ii) What are the main issues raised and what is common in the past, present and future? (iii) What kind of challenges are there for primary teacher education in future? The responses of participants were noted by the facilitator.

Qualitative and Quantitative Data

The data collected during the experiment was in terms of phrasal statements and verbally articulated responses of the participants. The responses were summarised in the table 1

Furthermore, the reactions of the participants on the technique of play were collected on three-point scale (favourable, neutral and unfavourable responses) which has been summarised in Table 2.

Results and Discussion

The role-playing produced favourable reactions among participants at 0 01 level of significance as compared to the usual lecture method of training The result of the experiment indicates that there is a need to identify the training and sensitisation issues that can be transacted through role-plays for inservice training of teachers This also has a bearing on preparing the trainers who could be skillful in using role-plays as a training technique for specific topics. The trainers of trainers (TOTs) need to collect and colate the role-play material and manuals for use by the trainers and currently there is dearth of such material.

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(See Rule 8)

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GANDHIJI'S TALISMAN

"I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test :

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it ? Will it restore him to a control over his own life and destiny ? In other words, will it lead to Swaraj for the hungry and spiritually starving millions ?

Then you will find your doubts and your self melting away."

MKGandhi

Editorial

Howard Gardner, who propounded the multiple intelligence theory, argues that every child has the potential capability to learn thousand languages, if given opportunity and environment to learn. This may seem to be an exaggeration. He has evidences to prove the same. The child who enters school with curious mind has to be nurtured into an intelligent and healthy young person by not only acquiring knowledge but also by constructing knowledge. A teacher in a primary school is much more than a mere teacher, who just teaches or imparts knowledge that is in books or in prescribed curriculum. S/he has to trigger and ignite the young and tender minds to be curious to explore things and enquire every happening and imagine even the unimaginable – both in and outside the classroom for the child learns from the whole environment. Using newer methods and innovative strategies to instill interest in children, teachers need to ignite their creative thinking and imagination to learn and construct knowledge while learning.

Articles and papers in this issue address some of the key issues in teacher education and effective classroom processes for sustaining interest of children. An attempt has been made to use learners nature and innate tendencies as basis for teaching learning process. The papers on mental health of family and how parents can play vital role in bringing up children as complete harmonious individuals, the need for quality educational television programmes and identification of visual perceptual disabilities in children would be of help for supporting children to learn and grow well.

The Primary Teacher welcomes suggestions for improvement and also for reaching out to people, readers, teachers, teacher educators and all stakeholders of education. Write your suggestions to the Academic Editor.

R. Meganathan
Academic Editor

CONSTITUTION OF INDIA

Part IV A

Fundamental Duties of Citizens

ARTICLE 51A

Fundamental Duties – It shall be the duty of every citizen of India —

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom;

(c) to uphold and protect the sovereignty, unity and integrity of India;

(d) to defend the country and render national service when called upon to do so;

(e) To promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities, to renounce practices derogatory to the dignity of women,

(f) to value and preserve the rich heritage of our composite culture,

(g) to protect and improve the natural environment including forests, lakes, rivers, wild life and to have compassion for living creatures,

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement.

A Study of Morale of Elementary School Teachers

R Natarajan
K Balan
District Institute of Education and Training
Krishnagiri - 635 601
Tamil Nadu

Morale of employees is a powerful force in any institution This is one of the factors which prompts a person to work maximum It holds the key to very crucial and critical work done for the achievement and success of the institution The study focuses to find out the existing teacher morale and its relation to the background variables of teachers working in 250 elementary schools. The Teacher Morale Opinionnaire (TMO) constructed by Anjani Mehta (1977) was used as a tool to assess teachers' morale The study revealed that high teacher morale existing among the teachers and none of their background variable caused significant difference among them

Morale is a human quality which prompts a person to produce maximum output. It is associated with forward looking, healthy and confidant state of mind and includes such attributes as persistence, enthusiasm, zeal and pride (Blum, 1964). The teacher's talent, efforts and contributions are the most important factors for achievement of an organisation's objectives These types of teachers are the living stock of an institution Effective teaching depends upon the harmony between institutional goals and the goals of an individual teacher In short, the teacher morale that holds the key to very crucial and critical work done for the achievement and success of the institution. Energy in enduring nature to over come difficulty and frustration, enthusiasm and zeal striving in pursuit of the school objectives and group cohesion and co-operative functioning of teachers who comprise the school staff are indicators of high morale teachers (Coverdale G.M, 1973) The features of average morale are satisfactory staff co-operation, some evidence of liking for the job and the leadership. The organisation is regarded as a good place of work. There is no strong feeling that people are not getting their rightful dues (Lallan prasad and Bannerjee, 1981). Low morale leads to disinterest, fatique, monotony, labour turnover, absentism, employee unrest, low performance, low achievement and other disciplinary problems (Finlay et.al., 1995).

The word morale is related to both individual and group. The term morale can be understood in various ways as 'the individual mood and spirit', 'professional loyalty', 'evident commitment' 'zeal and zest for their activities', 'attitude towards group values,' 'team effort' and 'willingness to work together for a common end'. It is associated with a team effort as opposed to individual striving (Ben M. Harries, 1963) Morale is identification with organisation goals (Pillai J K., 1976) It is a forward looking and confident state of mind relevant to shared and vital issue of purpose (Smith K.R., 1987). Hence, it is the personality of a particular group of people of an organization

It was proposed to study the morale of teachers with its following objectives.

Objectives of the study

1. To study the nature of morale of the teachers working in the elementary schools of Dharmapuri district in Tamil Nadu
2. To find out the relationship between the teacher morale and the following background variables of teachers working in the elementary schools of Dharmapuri district (a) sex (b) age (c) marital status (d) community (e) qualification (f) experience (g) location of school (h) type of school (i) type of class teaching (j) and distance of school from their residence.

Methodology

The methodology used for the study is given below.

Sample of the study

Dharmapuri district comprises of 18 blocks and having 210 primary schools and 187 Middle schools in which 2836 male and 3845 female teachers are working. 426 male and 849 female teachers were selected randomly from the 203 rural and 47 urban schools. The age of the teachers ranges from 28 to 58 years and in terms of their experience they vary from two to thirty six years.

Tool used for the study

The tool used for the study is Teacher Morale Opinionnaire (TMO) developed by Anjani Mehta (1977) and it is designed to provide a measure of teacher morale. The opinionnaire consists of 77 items and having eight dimensions. The responses are assessed through four point scale viz. Agree, probably Agree, Probably Disagree, and Disagree. For the responses to the positive statements, the values are assingned 4,3,2 and 1 respectively and for the negative statements, the values are reversed The tool was validated by using factor analysis.

Procedure

The present problem comes under normative category as the study deals with the process of collecting data on teacher morale as it prevails at present To collect data from the teachers a questionnaire was constructed It consisted of two parts. The part I again consisted of two parts The part A of I consisted of items intended to get information regarding teachers qualification, sex, age, marital status, community, experience, location of school, type of school, type of class teaching and distance from the residence to school. The part II consisted of Teacher Morale Opinionnaire (TMO) developed by Anjani Mehta (1977) Teachers perception of their morale were assessed by their responses to the items in TMO. The Teacher Morale Opinionnaire was administered to the 1275 teachers of 250 elementary schools of Dharmapuri district The collected data were analysed with the help of mean, SD, 't' and 'F' tests.

Analysis and findings

The value of mean, median and mode of the teacher morale distribution were found to be 244.79, 247 00, and 252 00 respectively. The standard deviation is 26.18 The standard errors of mean and S'D were computed to be 0.73 and 0.52 respectively. The Coefficient of kurtosis and skewness were 4.47 and -0.576 respectively. With 95 percent confidence the sample mean and S D would become the parameters with in the intervals of 243 35 to 236 23 and 25 16 to 27.20 respectively

Based on the mean and S.D of the distribution of teacher morale, three levels of teacher morale was determined as below 219, between 219 to 271 and above 271 That was taken in order these levels were considered as low morale, average morale and high morale respectively. These three levels of teacher morale were found to be very high when compared with the average level of morale indicated in the Teacher Morale Opinionnaire (192 5).

The mean difference between male and female teachers, married and unmarried teachers, working in primary schools and middle schools, working in rural schools and urban schools and teachers handling single class teaching and multi class teaching in their morale were found to be 0.38, 0 98, 1.07, 1 17 respectively. All of them are insignificant for their respective 't' values 0.24, 0 32, 0 62, 0 65 and 1.08 (for df 1273 in each) are found to be insignificant at 0.05 level. Accepting the stated respective null hypotheses with 95 percent confidence, it is concluded that male and female teachers, married and unmarried teachers, teachers working in primary and middle schools, teachers working in rural and urban areas and those handling single class and multi class do not differ significantly in their morale (Table 1). The mean difference of the morale of teachers working in elementary schools of Dharmapuri district in terms of their qualification, community, age, experience and distance of school from their residence has been found to be insignificant for the respective F values:

TABLE 1
Teacher Morale and Background Variables

Variable (1)	*Sub-Variable* (2)	*N* (3)	*Mean* (4)	*S.D* (5)	*M.D* (6)	*t* (7)	*Sig. level 0.05* (8)
Sex	Male	426	254.04	27.00	0.38	0.24	NS
	Female	849	244.66	25.55			
Marital Status	Married	1198	244.73	26.11	0.98	0.32	NS
	Unmarried	77	245.71	27.40			
Type of School	Primary School	968	245.05	27.27	1.07	0.62	NS
	Middle school	307	243.98	22.40			
Location of School	Rural	1006	245.05	26.28	1.17	0.65	NS
	Urban	269	243.87	25.83			
Class Teaching	Single class	873	245.33	24.67	1.71	1.08	NS
	Multi class	402	243.62	29.18			

1.18, 1.38, 0.97, 1.65 and 1.45. These are found not to reach the required table value at 0.05 for respective dfs.

Hence, retaining the stated respective null hypotheses with 95 percent confidence, it is concluded that the teachers based on their qualification, community, age, experience and the school distance from their residence do not cause any significant difference in their morale (Table 2)

Conclusion

Based on the interpretations, the morale of the teachers working in elementary schools of Dharmapuri district constitutes negatively skewed platykurtic distribution. The morale of the teachers are found to be very high among the teachers of elementary schools. None of the ten background variables viz., sex, age, marital status community, qualification, experience, location of schools, type of school, type of class teaching and the distance of schools from their residence have not influenced to cause for any significant difference in the morale of teachers.

High morale exist among the elementary school teachers due to introduction and implementation of District Primary Education Programme (DPEP) in the district. It provided training to the teachers, provision for purchase of teaching learning materials and equipment, additional appointment of teachers and provided required infrastructure facilities. Moreover, high paid salary, well united teachers association, command of social respect by the elementary school teachers and counseling based transfer policy of the government helped to boost up the morale of elementary school teachers.

TABLE 2
Teacher Morale and Background Variables.
(One way ANOVA)

Background Variable (1)	*Source of Variation (2)*	*df (3)*	*Sum of Squares (4)*	*Mean Squares (5)*	*F Value (6)*	*Sig. level 0 05 (7)*
Qualification	Between groups	6	4825 92	804 32	1 18	NS
	Within groups	1268	868133 74	684 64		
Community	Between groups	3	2842 74	947.58	1 38	NS
	Within groups	1271	870116 92	684.59		
Age	Between groups	2	1332 08	666.04	0.97	NS
	Within groups	1272	871622 57	685 24		
Experience	Between groups	2	2263 84	1131 92	1.65	NS
	Within group	1272	870695.81	684 50		
Distance	Between groups	2	1979 02	989 51	1.45	NS
	Within groups	1272	870980 64	684 73		

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Using Learner's Nature and Innate Tendencies as Basis for Teaching-Learning Process

LALIT KUMAR
Women's Training College
North Gandhi Maidan
Patna University
Patna

Teaching is a process of stimulating, directing and guiding learners to be a part of the process through which they construct knowledge. Teacher attempts to make use of all possible ways and means to enrich the process. This paper presents how learner's nature and innate tendencies can be used for making teaching-learning process effective

As teaching is a process of stimulating, directing, and guiding the learner, the teacher must have an intensive knowledge and understanding of the physical, mental and emotional potentialities of those whose educational activities s/he hopes to direct and guide. Equally important is a thorough understanding of the psychological principles that govern human behaviour, especially in relation to teaching and learning process. The basic principles of teaching deal with the nature of the child, who is to be educated The history of education reveals to us that Rousseau was among those great educationists to insist that education should be based upon the nature of the child. His book *Emile* has been called the Gospel of educational freedom for the child. He stated that the nature of the child rather than the logical order of the subject-matter should determine the nature of teaching. He wished that education should aim simply to ensure the free development of those potentialities with which nature endowed the child.

Like Rouseau, Pestalozzi emphasised the importance of the nature of the child and propounded that in the educative processes, the child must be thought of in relation to the subject matter He sought to understand the nature of children and to build his teaching around the "natural, progressive, and harmonious development of all the powers and capacities of human being " Pestalozzi desired to develop children according to the natural laws Early educationist like Froebel and Herbart built education upon this foundation They conceived of education as a natural development of innate powers Thornkide recognises the nature of the child as the first principle for all education. He believes that it is just a principle of education to utilise any individual's original nature as a means of changing him for the better, to instill in him the knowledge and produce in him the habits, powers, interests, and ideals which are desirable John Dewey is also in agreement with those who believe that education should centre on the individual child, but he takes the view that the child must be considered as a member of the group.

Indian views of the term *education* also focus on the innate capabilities of the child According to Rig Veda "Education is something which makes man self-reliant and self-less" Vivekanand says, "Education is the manifestation of perfection already existing in man " and Gandhi conveys "By education, I mean drawing out of the best in the child and man-body, mind and spirit" In this way we see that great educationists have considered develop-ment of inner potential of students as one of the important functions of education.

It is a sad state that the human aspect of education does not receive great emphasis Teachers and educators in general have given so much attention to the acquisition of subject-matter that they tend to think less of the pupil. Education of the child should begin with the proper training and direction of the child's original tendencies and needs The initial point of teaching and learning is the biological equipment of the learner The child's original nature, or what s/he inherits is the capital with which education must work His intelligence, attitudes, interests and desires underlie the educative process His acquisition of knowledge, his formation of habits and skills, and his development of abilities and attitudes are conditioned and limited by his biological equipment. The innate tendencies become a drive to teaching or stimulus to learning The teacher need to provide the necessary conditions and opportunities by using them.

The teacher may know many things and be ready to teach them, but he will have little success unless he has knowledge of the mind of his pupils and of what goes on there, which knowledge he can only learn by keen observation. The skillful teacher is one who will constantly seek to utilise to the fullest extent those tendencies which seem most potent. The primary concern of the teacher is not only his subject-matter but the child and his innate tendencies, not the knowledge of child speciality, but knowledge of the laws and principles of child growth and development. There are many facts concerning these inborn tendencies which are useful in teaching and learning.

Intelligence

The different concepts and theories of intelligence point out the importance and functions of intelligence in gaining knowledge. Whatever technique of teaching is to be used by the teachers, the part that intelligence plays in the education of the learner must be considered. General intelligence and ability to learn are very important. In a competitive examination general intelligence are measured because it predicts the success of the individual in any specific field The effectiveness of learning is conditioned by the degree of intelligence. Students with high intelligence are easier to teach or to direct and guide than students with low intelligence. Selection of teaching methods or procedures involving higher degree of thinking and reasoning cannot be utilised for all the students having different levels of intelligence. On the basis of I Q there is the necessity of classification of students into different groups for teaching. Same teaching for brighter, average and below average students are not advisable. There are three levels of teaching - memory, understanding and reflective; there are three types of question-higher order, middle order and lower order. These levels of teaching and types of questions depend on intelligence. Every level of teaching cannot be suitable for all group of students, every types of question cannot be asked for different intelligence groups So intelligence is one among the important capabilities to be taken into account in the teaching-learning process.

Imitation

Imitation is the tendency of the child to act according to what he sees or observes Oral language is based primarily on imitation. Pronunciation and intonation patterns are best learned through imitation and practice The correction of speech defects, pronunciations, and correct language forms depend on imitation. Whenever models or standards are used, imitation plays an important part. Motor skills are best developed through the use of imitation Imitation is an important moral, social and intellectual agent in formal education. It has its greater importance in informal learning As psychologists suggest imitation is a great source of learning specially in childhood and adolescence

Broadly speaking, imitation is of two types: dramatic and idealistic. *Dramatic imitation* is based on mental image formed by the individual. Imitating certain character in the story read is a good example of dramatic imitation. This type of imitation is used in reading and drawing. *Idealistic imitation* is based on a concept or some standards to be accomplished, Idealistic imitation is availed of in speech, music and writing.

Emotions

Emotion is generally defined as a blend of sensations caused by the profound and wide-spread changes within the body. Emotion is the very basis of modern education, an essential element in the adjustive nature of life process. All learning has emotional correlates

Fear, love, anger, joy, sympathy, confidence, enthusiasm are some examples of emotions which are commonly met in teaching-learning process. Pleasure in learning has an additional value. It needs to be recognised that learning proceeds more effectively when pupils are not emotionally disturbed Love can be utilised best in developing appreciation and proper attitude towards things, places or people. Praise can also be utilised to best advantage in teaching, specially when it comes from the person held in esteem by the learner A happy and satisfied learner learns better and an emotionally stable teacher performs better Positive remarks, democratic behaviours and favourable attitude have greater impact on teaching-learning process.

Manipulation

Manipulation involves skillful management or control of actions by means of intellect. It is instinctive for a pupil to explore an object, to take it to pieces and to put them together Manipulation can best be used in motor learning. The child adds much to his education by his natural tendency to explore and discover The school should provide him/her with activities which give opportunity for expression through manipulation, constructing models illustrating knowledge of principles learned A child who has something to manipulate is seldom in trouble. In teaching, therefore, the more manipulative activities are introduced the easier the learning will be. To manipulate is to learn by doing and manipulation leads creative acts. A figure can be given to a child to add something to make the figure more beautiful and attractive Similar tasks providing opportunity for manipulation can foster creativity among students. Manipulation can better be utilised in practical works, drawing, etc.

Competition and Rivalry

Both competition and rivalry are parts of the social trials. Competition or rivalry creeps into a person's effort when he is working in the presence of others. Competitive behaviour, like rivalry, is something people learn in groups This is also the way in which they learn cooperative behaviours. When a pupil is engaged in some activity, s/he instinctively does better work if there are other pupils engaged in the same activity Activities which are otherwise completely absorbing take on an added thrill that of conquest inspired by the spirit of competition or rivalry. If competition of one group against other group is conducted properly, it gives training in cooperation and sportsmanship Competition is useful if the groups competing are relatively equal If the less able are placed in competition with the more able, more harm than good is likely to result.

Collecting

Collecting can be utilised as a source of interest in school work, especially in the elementary and secondary schools. When utilised in connecting with specific school subjects, this tendency usually proves most fruitful in stimulating some phases of geography, elementary and general sciences, and history. Different objects collected by the first grade pupils can be best utilised in learning number concepts in arithmetic and in vocabulary building. Hoarding can also be of value to the pupils, if they are properly motivated and directed. Thrift is the outcome of properly directed hoarding.

Play

Play is the characteristic of infancy, and infancy is the period of special capacity to learn. In children play consists of the immature manifestations of the innate tendencies. This tendency is so powerful that it drives the individual into activity. Froebel was the first educator to introduce play as an essential part of school work. Educators do recognise the educational importance of play in teaching and learning. Play as a method of teaching has received due recognition by educational technology and many learner centred methods of teaching as simulating has gained momentum in teaching-learning process. Play is a great factor in physical and mental development It is a good incentive to learning especially in the lower grades. It also has moral advantages. Cooperation, teamwork, and mutual understanding are important values to be derived from play. The elementary school teachers should endeavour to utilise the tendency or desire to play as a factor in the mental, physical, emotional, social and oral development of the child. It is not only a pedagogical device but it is a nature's plan of growth and development for every individual child or adult. It can be utilised to motivate the students by saying that they will be allowed to play, if the task allotted to them is completed.

Gregariousness

Gregariousness means the desire of the individual to be with others or other groups. It is self-evident truth that children as well a adults, prefer to be with others of their own kind and are unhappy when they are alone. The individual depends on the group for the satisfaction of many of his needs, the groups approve and disapprove his behaviour and force him to continually learn and modify his behaviour. Practically all learning takes place in the presence of others, either of children or adults. This tendency can be utilised in school to the best advantage. The teacher may use the gregarious tendency by means of games, group projects, and other group activities to improve classroom discipline and develop intellect, character, and skill. Gregariousness furnishes the basis for social or group consciousness and the teacher must learn to understand and make use of group consciousness or group sentiment in governing differen academic activities.

Curiosity, Attention and Interest

Curiosity is one of the important innat tendencies that underlie learning Curiosity is the basis of any invention or creation. Because of curiosity, th individual manipulates things with th aim to gain new experiences. Curiosit is an elementary form of interest. It importance in teaching and in learnin is recognized by many educators. Curiosity is a valuable agent in education when it is rightly valued and employed A teacher should not try to suppress the curiosity of children and should try to utilise this innate tendency for creative expression.

Attention can be directed towards an object, a work, a thought, and an emotion Learning takes place best under conditions of clear and individual attention. To facilitate learning of the students the teacher must endeavor means and ends sufficiently meaningful and attractive to command attention of the pupils for a considerable period. The phenomenon of attention is closely related to that of insight Educational technology lays emphasis on attention and suggests teaching skills like stimulus-variation to divert the attention of the students whenever they become mentally absent from the teaching-learning process.

Pupils work very hard when the problem to be solved is one that has real meaning, interest and value to them The inclusion of facts and principles in a course should depend upon what value they have, not upon their momentary appeal In short, teachers should teach worthwhile in a way that will interest students, but they should not try to teach only what is interesting The teacher can make the students interested to learn and can present the subject matter in an interesting manner

The above discussion reflects that the innate tendencies play very important roles in teaching and learning processes, knowledge of the student's characteristics is necessary to enable us to understand how education can be most effective for the mental, physical and personal improvement of the students. These innate tendencies can be used as powers to effective teaching and to productive learning. The subject-matter to be taught and the methods of teaching and other instructional devices to be used are conditioned by these tendencies common during the different periods the child's growth and development. The business of education is therefore to utilise and direct these tendencies in such a way that they will produce activities which will lead to further useful activities.

Adjustment of Prospective Teachers

Digumarti Bhaskara Rao
Dega Raja Sekhar
R V.R. College of Education
Guntur 522 006
Gadde Bhuvaneswara Lakshmi
Nagarjuna University, Nagarjuna Nagar 522 510
Andhra Pradesh

Teacher's adjustment to the new environment in school influences classroom interaction and learning process. This study conducted to find out the adjustment of prospective teachers shows that the level of adjustment of teachers in schools is only at an average (level.) It gives clues for effecting changes in teacher education curriculum to produce committed teachers, who could well adjust to school environment and be effective in classroom.

Every human being seeks adjustment in various situations. There will be characteristic disturbances in each stage and need to be ameliorated during the very period of their emergence. Students of any stage of education, like individuals in the society, face several problems in some area or other of eduction, career and life. The students who make good adjustment to these problematic situations excel well in all aspects, otherwise the students tend to develop personality problems which disturb their whole life. A teacher has to be the most adjustable person to make students understand problems in education and life. Here an attempt has been made to study the adjustment of prospective teachers.

Research Design

The objectives of the study were : 1. To find out the level of adjustment of prospective teachers. 2 To compare the level of adjustment of male and female prospective teachers, post-graduate and graduate prospective teachers, and science and social studies prospective teachers

Identifying the very role of the variables, the variables namely male vs female prospective teachers, post-graduate vs graduate prospective teachers, and science vs social studies prospective teachers were selected to study the adjustment of these variables

The Hypotheses

The hypotheses were formulated in null form They were·

1 The prospective teachers are not possessing high adjustment
2 There is no significant difference in the level of adjustment between men and women prospective teachers, science and social studies prospective teachers, and post-graduate and graduate prospective teachers

The Method

The stratified sampling technique was found to be the most appropriate technique for the present study The sample was divided into different groups to choose prospective teachers from each of these groups through stratified sampling method, it was employed along with random sampling technique to select sample from each group. A sample of 200 prospective teachers was selected for the study

The Indian Adaptation of Bell's Adjustment Inventory was used to collect the data from the prospective teachers.

The mean, standard deviation, critical ratio and chi-square test were used to draw conclusions from the raw data

Discussion and Conclusions

The following are the conclusions drawn from the analysis of data The conclusions are discussed in detail and necessary suggestions are given to improve the adjustment in prospective teachers

1. ***The prospective teachers were with average adjustment. The adjustment was tending towards high adjustment level in the sample.***

The prospective teachers are supposed to have good adjustment as they are going to become teachers in near future where they are expected to build the personality of their students. As a well-adjusted teacher is aware of his merits and limitations, he will lead a better life and guide his students to adjust well So, it is necessary to have good adjustment by following different ways and means by the prospective teachers. Proper adjustment can be developed through direct methods such as increasing means depending on the complexity of the situation, following withdrawal or submissiveness according to the situation, and making proper choices and decisions which suit to his/her talents.

Adequate adjustment can also be developed through indirect methods or defensive mechanisms such as repression, forgetting, regression, compensation, rationalization, projection, identification, seclusiveness, withdrawal, sublimation, undoing and intellectualization As a maladjusted teacher is great threat to the student community in particular and society at large, it is necessary to develop better adjustment in teachers by the agencies of education through adjustment procedures and guidance and counselling.

2. ***Both men and women prospective teachers were holding average adjustment. When compared, women teachers were possessing a little bit high adjustment than their counterparts. The adjustment level was tending towards high in both men and women prospective teachers.***

Men prospective teachers are holding a little bit low adjustment than women prospective teachers. When thought of critically, the little difference between the two sub-samples is negligible. It is an utmost priority on the part of these sub-samples to develop better adjustment in them by following various ways and means of adjustment development in order to become well-adjusted and effective teachers in near future.

3. ***The science and social studies prospective teachers were with average adjustment. The social studies prospective teachers were possessing a negligible amount of low adjustment. In both the sub-samples, the adjustment level was tending towards high adjustment.***

As these prospective teachers are holding average adjustment level they are supposed to enhance it in order to become models to their students.

4. ***The prospective teachers with graduate and post-graduate degrees were holding an average level of adjustment. In graduate prospective teachers, the adjustment level was tending towards high adjustment, but it was normally distributed as per expectations in the post-graduate prospective teachers.***

We may think that the educational qualifications may help the students in acquiring better adjustment. Here, in the sample of prospective teachers, the qualifications do not seem to have any influence on adjustment. However, as these sub-samples are having an average level of adjustment they are supposed to improve their adjustment in order to become better teachers

In the present study, the whole sample of prospective teachers is having an average level of adjustment. The sex, the subject, and the qualification are not influencing thier adjustment. These prospective teachers are supposed to improve their adjustment level in order to become effective teachers, to live well in the society and to make their students adjust well in school and society.

Suggestions for Further Research

In the light of the above conclusions and discussions it would be better if the following research studies are taken up in the area of adjustment.

1. Studies may be taken up to study the adjustment of in-service teachers considering their age, sex, experience and qualifications.

2. Studies may be taken up to identify the relationship between psycho-social factors and adjustment.

3. Studies may be taken up to study the influence of teacher's adjustment on the adjustment and achievement of students

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Effect of Competency Based Evaluation on Students' Attainment at Primary Level

SUSANI MISHRA
D.M. School
Regional Institute of Education
Bhubaneswar 751 022

TAPAN KUMAR BASANTIA
P.G. Department of Education
Ravenshaw (Autonomous) College
Cuttack 753 003.

The present study attempts to examine the effect of competency based evaluation on students' attainment at primary level. The study was conducted on Standard-II students in the subject of Environmental Studies. From the analysis of the result, it was found that systematic and well planned competency based evaluation has profound implication on the attainment of learning achievement of the students.

THE National Policy on Education (1986) and its Programme of Action (PoA) 1992) have emphasised on minimum levels of learning (MLL) for each grade, which acts as the performance goals for the teachers, and provides a focused approach to teaching learning process Achieving equity and reducing the existing disparities in learning achievement among the students are the major objectives of MLL approach to learning. Each level of learning consists of a number of competencies of its different areas of study; and each competency requires a particular learning approach for its attainment. In the context of MLL, competencies of different subjects are learning objectives which ought to be acquired by each and every learner to a mastery level through a time frame of reference. When a competency has been developed in a student, s/he would be able to perform specific tasks related to that competency The competencies for each subject and each grade have been arranged from simple to complex The learning of one competency helps for the learning of the next competency When a competency has been learnt thoroughly by a child, we say that the competency has been mastered or acquired efficiently. Development of the competencies into mastery level is the major concern of MLL approach For this purpose, a teacher has to select and arrange the teaching learning units in proper order. And in this context child centred, activity oriented and competency based teaching meet the learning needs of the children.

Continuous and comprehensive evaluation is the one of the most effective means of achieving the learning outcomes or competencies by all pupils of a particular class The teacher must be clear about the competencies which are to be developed among students. These competencies help the teacher to decide the content, appropriate teaching strategy, teaching learning materials, evaluation techniques and also the remedial measures for those who fail to attain the competency upto the mastery level. It is necessary to evaluate the pupils achievement on regular basis in order to make a pupil master in a particular competency. There are cluster of competencies and sub-competencies in a particular unit. Each child has to acquire mastery level in a particular competency before s/he proceeds to learn the next competencies which are sequenced hierarchically in each unit in order to make the learning process continuous, easier, enjoyable and achievable for each learner in a particular grade. Achievement of the mastery level of competency among all the students of particular grade is one of the important features of MLL The teacher helps learners to acquire the competencies of a particular unit through continuous assessment by conducting written, oral and performance tests in scholastic areas, and following the continuous observation and interactional techniques in the co-scholastic areas. Progress cards representing the assessment of the child is conveyed through the symbols like "masters", "non-masters" and "partial masters" in particular competencies. In operational terms 80% achievement of a particular competency is the performance target of the teacher "non-masters" and "partial master" are exposed towards further learning and remedial instructions Re-evaluation is to be done to help the child to reach the mastery level

An Examplar Experiment conducted in D.M School, Regional Institute of Education, Bhubaneswar

Need for the Study

For developing the competency of knowledge regarding the importance of local and national festivals, and understanding regarding the celebration of national and different other festivals among the class-II students through environmental studies, the investigators followed the competency based teaching-cum-evaluation approach. The study was conducted among the Class-II students of Demonstration Multipurpose school, Regional Institute of Education, Bhubaneswar.

Objectives of the study

- To identify the competencies/abilities that are to be fostered among children.
- To transact the competencies through formulated activities and various learning modes.
- To design and construct competency based test items for assessment of the abilities/competencies.
- To study the effectiveness of competency based evaluation technique as a device for qualitative improvement of primary education.

Competencies to be achieved

- Oral expressional ability
- Comprehension ability (Listening/reading)
- Manipulative ability
- Performing ability
- Cognitive abilities like critical thinking, ability, evaluative ability and explorative ability.

Activities/Strategies to be followed

- Organising role playing.
- Telling stories and narrating experiences.
- Performing songs and dances.
- Recognising and identifying the symbols
- Reading printed and hand written materials.
- Writing one word answer.
- Cutting, pasting and arranging the materials to display in the class

Learning modalities

Group learning, self learning, pair work, participatory learning, guided learning, integrated learning approach etc. were followed for achieving effective out come. Every child got opportunity to learn through individual and group activities which helped them to develop the concept attainment in the relevant topic.

Methodology

A systematic planning was made for class-room experimentation and materials were kept ready Activities were also planned for transaction of learning experiences for assessment of various competencies.

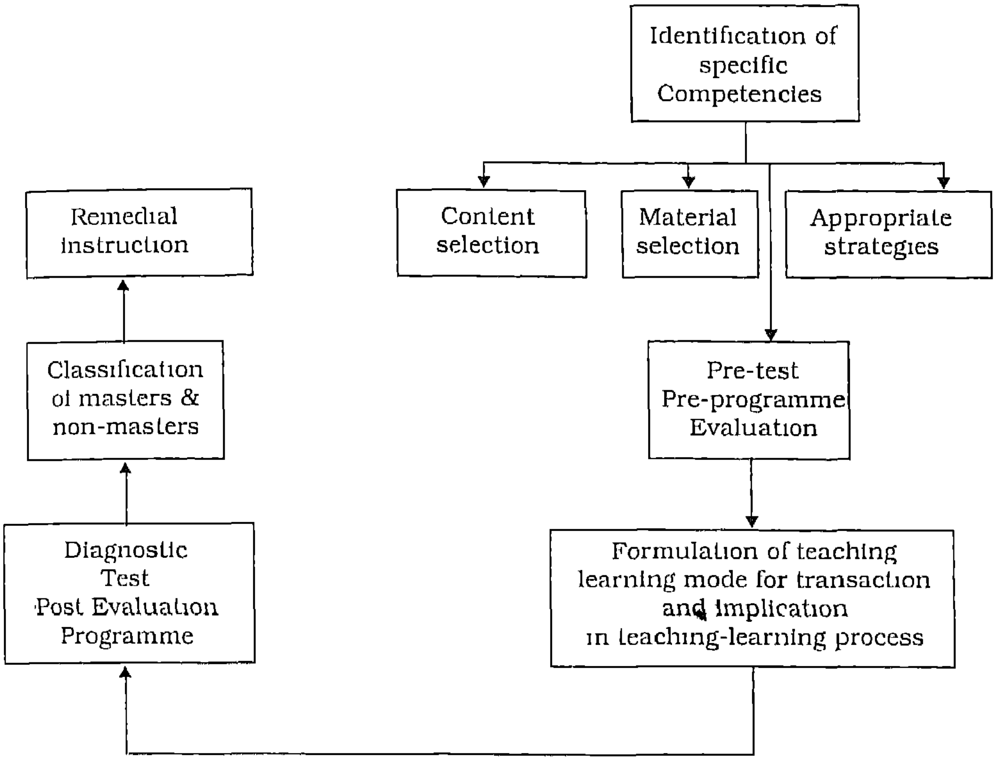
Design of the Experiment

The experiment was conducted in three phases:

Phase-I: Learners attainment were recorded through entry level of behaviour (pre-programme evaluation). Thus base line data were calculated by oral, objective (written) and performance based tests and the results were recorded.

Phase-II: Activities were planned for teaching through various teaching learning modes for the transaction of various competencies. The required learning materials, make up, dress materials etc. were collected. A number of learner centered activities were conducted which included the reading

COMPETENCY BASED EVALUATION MODEL


Identification of specific Competencies
Remedial instruction
Content selection
Material selection
Appropriate strategies
Classification of masters & non-masters
Pre-test Pre-programme Evaluation
Diagnostic Test Post Evaluation Programme
Formulation of teaching learning mode for transaction and implication in teaching-learning process

printed/hand written materials, telling stories, narrating experiences performing dances, role playing, singing, cutting/parting/arranging picture and displaying different activities. Drawing, painting, group activities, oral and performance activities etc. were organised by the investigators for evaluating the learning attainments during experiment

The methods adopted include. Self-learning, individual as well as group project work, discussion and co-operative learning, demonstration, assignment, etc.

Phase-III: Post evaluation programme was organised in this phase. Competency based items were administered in the evaluation process. Students' attainments were assessed through oral, objective (written) and performance tests. The data were analysed through statistical means.

Sample questions for evaluation

A **_Oral Test_**

1 How do you celebrate Diwali and Holi?

2. When do you burst crackers?

3. When do you play with colour and Gulal?

4 What do you do on independence day?

5 How many colours are there in our National Flag?

6 What do girls do on Rakhi Punima?

7 In which festival santaclus comes with toffees and balloons?

8 Tell the names of the festivals celebrated in your family?

9 Tell which festival do you like most and why?

10 Tell the names of the popular festivals of Orissa, West Bengal and Kerala.

B. **_Competency Based (Objective)_**

Written Test.

Samples:

I Use these words to fill in the blacks

(Diwali, Colours, Onam, Id, Church)

1 Holi is a festival of __________

2. On __________ Muslims friends pray in the Mosques.

3 __________ is a festival of lights.

4 __________ is the harvest festival of Kerala.

5 Christians pray in the __________

II Match column-I with column-II

I	II
Santaclus	Muslims
Id Mobark	Sikh
Gurdwara	Diwali day
Goddess Laxmi	Christmas day

Performance Test

(i) Colour the National Flag (Outline picture was given)

(ii) Pictures with outlines were supplied and pupils were asked to colour

(iii) See the pictures and name them

(iv) Observe the pictures and do any symbolic action.

(v) Learn the National song by heart and practice in the class

(vi) Collect the pictures of different religious places and paste them in the albums

(vii) Prepare the greeting cards of different festivals

(viii) Songs on Holi, Diwali, Durgapuja were composed and dance activities were assessed.

Result and Discussion

Table 1 shows that before competency based evaluation the percentage of masters in pre-test was 25%. But after competency based evaluation the percentage of masters become 88.8% in post-test. The difference between masters in pre-test and post test was 63.8%.

Table-II shows that before the competency based evaluation, the per

TABLE 1

Class	*Types of test*	*Total pupils*	*Pupils assessed*	*% of masters*	*% of Non-masters*	*Difference between % of masters in pre-test & post-test*
II-A	Pre-test	37	36	25%	75%	63 8%
	Post-test	37	36	88 8%	11 2%	

TABLE-2

Class	*Types of test*	*Total pupils*	*Pupils assessed*	*%of masters*	*% of Non-masters*	*Difference between % of masters in pre-test & post-test*
II-B	Pre-test	40	38	20%	80%	60%
	Post-test	40	38	80%	20%	

centage of masters in pre-test was 20%. But after the competency based evaluation, the masters increased into 80% in post-test. The difference between masters in pre-test and post-test was 60%

Findings

The findings of the above study suggest that

- Attainment of the concepts and development of multiple abilities/ mastery of competencies can be possible through competency based evaluation techniques at primary level
- Competency based performance tests and oral test provide maximum exposure to children and motivate them to concentrate on the required competencies which help them to reach the mastery level.
- Competency based evaluation approach, creates interest, attention and learning attitude among students.
- This competency based evaluation technique helps in the acquisition of different performance skills, and enhances the level of listening, reading and comprehension abilities among children.
- The findings also indicate that number of non-masters decreased and that of masters increased considerably by competency based evaluation process.

It is concluded that a well planned competency based evaluation has profound impact on learning achievement at primary level.

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Group Discussion and Activity Method in Large and Medium Sized Classes at Primary Level

VIJAY KUMAR HEER
GPS Raih-Jajri
Hamirpur
Himachal Pradesh

This innovative way of teaching using group discussion and activity for effective teaching-learning process in the classroom experimented by the author provides ample scope for using this method for effective teaching learning in classroom involving every child in the learning activities of classroom.

Introduction

ANALYSIS of research available on methodologies till date could sum up the need for any effective, dynamic and progressive methodology at elementary level. With great works of Lecture-cum-demonstration method, Heuristic method, Project and Assignment method, Montessori and Kindergarten Method, Analysis and Synthesis or Inductive-Deductive Method, Laboratory, Problem Solving Method, Topic and Chapter Method Unit and Co-relation Method, the fields of higher, secondary or university level education have been benefitted, but has done little to primary education. So an equally important new method which is applicable from Elementary education level to Higher education level is being attempted by the author named as Group Discussion and Activity Method (G.D.A.M.).

Group Discussion and Activity

Child is elusive and unmatured. Psychologically, s/he can't stop discussion because it is his/her soul of daily activities and the reason of socialization. Man is a social animal having the ego to be distinctive and leader Group discussions provide him all such opportunities to expose, progress and improve his knowledge of every subject. Languages, Moral education, EVS and Maths etc. are the matter of practice and habit formation. Hence this effort to use children's group discussion and activity making scheme and tendencies with a moderator, activity facilitator and guide-processor activity. The major objectives of the study were to find out whether group discussions and activity are useful at primary education.

Objectives

a) To study the effective methods to implement group discussions

b) To activate the students about growing education and development.

c) To study the motivation of children during GDAM.

d) To study the managerial skills required to implement GDAM

e) To study the learner's problems, while undergoing GDAM in medium or large sized classes

f) To judge the psychological values and benefits of GDAM.

g) To study the effectiveness of GDAM as the key method of teaching-learning strategies of every subject at primary education level.

Methodology

This study is an experiment based on useful group discussions' effective role, every type of activity and experiment in groups as qualitative and experimental approach to teaching-learning strategies at elementary level.

Sample of the Study

This sample of study included 39 students class IV at G.P.S Ralli-Jajri, Hamirpur, Himachal Pradesh. It is useful in single teacher schools as inter class group discussion and experimentation would form the strategies of Multigrade teaching

Duration

December 2002 to March 2003

Planning for GDAM

The competencies of children were known to the teacher because he had finished almost three-fourth of syllabus. So the topics for revision for some studies had been decided some teaching hints or points were established. With fathom psychological understanding, use of motivation and interest level, GDAM was planned

The materials required for demonstration and instructions were kept ready in the laboratory for use. The teaching-learning strategies, management and topics, and all the other arrangements were done With a view to develop concrete experience to abstract experiences, psychological and attractive knowledge, learner-centred approach and as a dose to co-curricular and other activities, continuous evaluation and equisive approach, the programme of GDAM was designed

Management and Classification

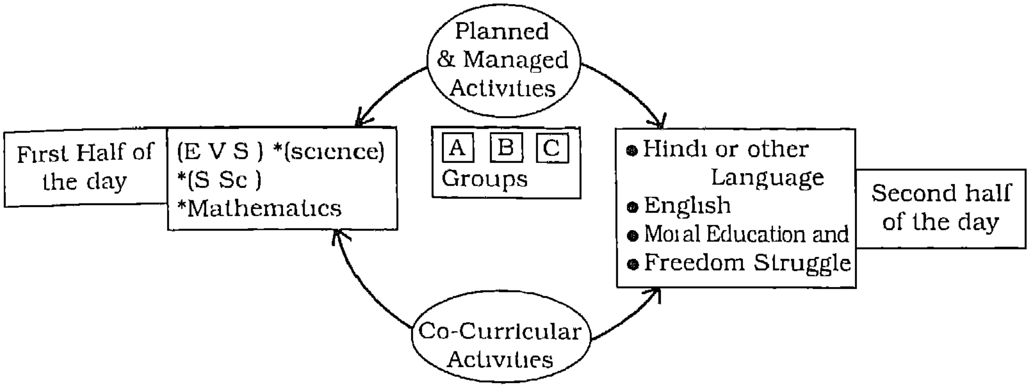


Diagram 1.1: An Illustration of classification of GDAM

Implementation of GDAM

The time table was decided and EVS was under focus for four and half hours per week, Maths for five hours, English for four hours, Hindi for four hours, Moral education for five hours and co-curricular activities for remaining periods.

The teaching learning process incorporated the following strategies through group discussion and activity based experiment approach.

a) Classification: Three groups A, B, C (per of 13 students) were classified with a definite classification according to cumulative records and achievement level of children.

b) Observation: The positions of children were observed and settled. Brilliant students were kept after every third child and crucial observation was made.

c) Topic: The topics of discussion were divided and children were asked to think and deliberate. Every student was advised to write his idea in his copy Some useful direction and knowledge tips, instruction were revealed by teacher to each group

d) Group Discussion: Students were prepared to expose and express their ideas about problem given to them. With the help of their competencies and pre-knowledge, all the ideas were synthesised by teacher with analytical and reformatory approach, the other information and corrections were introduced in each group.

e) Moderatory Role of Teacher: Teacher advises students to adopt suitable method of the group discussion to end hesitation, misunderstanding and active participation of students with pre-preparation.

Strategies

i) Teaching of Maths: With a lesson plan of a dose of knowledge with lecture-cum-demonstration method, students are told to deliberate on further problems Then *Induction* and *Deduction* methods are finally obtained by children as the conclusion of group discussion. With pervasive work on problems and practice, group demonstration and innovative examples with the help of audio-visual aids will prove superior results. Then students are asked to write down all the conclusions

Learning in small pieces give them good understanding and teacher can demonstrate many examples with various audio-visual aids.

ii) Teaching of Science: Various group discussions may surround different problems of daily life and environment. With scientific way of discussions, other methods may be blended. It is useful to idealise the life of great scientists and several important discoveries. It is useful to use activity based teaching with problems solving method as an alternative to GDAM

Laboratory may be central hall of discussion for science. As usual, children express their idea, pre-knowledge and the limit of scientific thought.

iii) Teaching of Social Sciences: All natural, unnatural problems and concepts are deliberated with a good extent of students and teacher's participation.

Map work and globe watching get legitimised form and children feel satisfied with the method as they get permanent knowledge.

iv) Teaching of Languages: Language analysis, systematic understanding and group practices make important in fluency, knowledge and the pronunciation aspect of the language Hence it is useful for teachers to teach them any stanza or paragraph and then follow the practice. Enough corrections by group mates and guidance of teacher will work wonder.

v) Moral Education, Arts and Work Experience: Special focus on Yoga and exercises (as per hours/week) and the art work on various festivals, national day, co-curricular or related activities boost the skills of children in arts and health and physical education. With project and GDAM, the blended method causes great success in project method. High personalities, moral, social, ethical, spiritual and all round values described in Moral Education get the practical edge and of course the success is achieved.

vi) Demonstration and Experimentation: It may be followed as described in the crux of GADM and group wise understanding doesn't cause the faults which are the fruit of over crowded class rooms or lack of basic facilities in demonstration and experimentation.

vii) Co-operative Learning: Students are advised to check their views among themselves and synthesize the matter for conclusion. If students have problems, teacher may end with his guidance.

viii) Output Evaluation: Teacher may intervene or evaluate the students' understanding with psychological group tests and keen understanding of the level of students.

ix) Dramatisation / Quiz / Co-curricular activities / Competition: To check the output, it may be used according to the subject and requirement. In each month, such type of competitions rewarded children with appreciation, knowledge and skills of debate or elocution handwriting competitions, etc

x) Assignment Programme: In the last step, students are asked to submit their *masterpiece of knowledge* in the form of assignments. Good performance in assignments will encourage the children to write creatively.

Findings

Record of participation is checked in observation as a mode of evaluation Hueristic approach in disciplined manner is followed. Hence the monotony of the classroom teaching is ended with a pleasant experiment. It was found that seventy percent of children of class IV made remarkable progress as masters and other non-masters were repeated the topics for discussion at the time of sending the report.

Crux Points

i) GDAM requires proper knowledge and understanding of the level of children with a great psychological dealing. The competencies of children should not be neglected.

ii) A flood of activities may be adopted for masters of the topic of discussion They are equipped with quality of leadership. With great efforts in innovative audio-visual aids, success is achieved soon.

iii) Children enjoyed the way in which they learned 'hearistic-cum-lecture-cum demonstration-cum-experimentation-cum-project and assignment method'. Hence it is the subordinate or helping method.

iv) GDAM benefited non-masters by giving them confidence to solve problems by practice and group discussion with masters of topic.

v) Learning strategies succeeded because of psychological enrichment of the method With stress on child's knowledge and experience, they learnt more easily.

vi) Children learnt to discuss the topics in absence of the teacher.

vii) GDAM motivated children to master their topics with ideas and the enriched competencies. Hence it becomes worthy to achieve soon.

viii) Large or medium sized classes get much easier management and learning. Single teacher school students learn to be co-operative in learning

ix) GDAM is useful for children because they become professional and practical Group discussions have a great role in getting jobs today. Hence this initiative may be revolutionary at each level of education.

x) Masters of practice, habit formation, sensitivity with scientific techniques, etc. are the epicenters of GDAM. Hence it is valuable for all subjects.

xi) Qualities of leadership and confidence enhance.

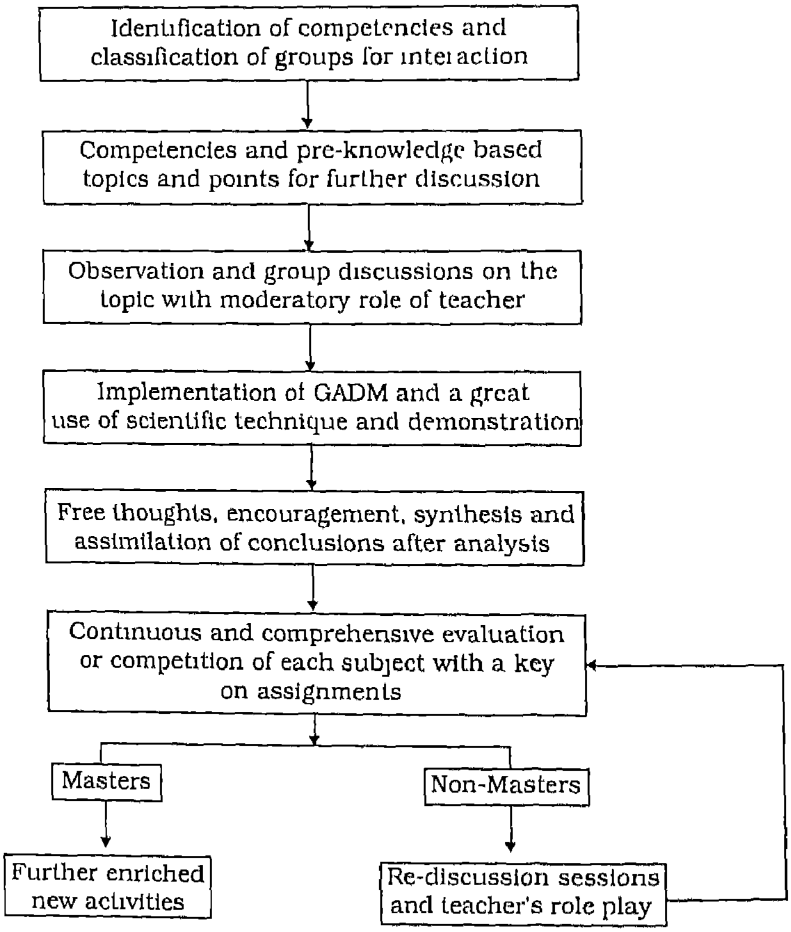
xii) Children learn to become active listeners and emotionally strong. Patience to listen to others with a great debatic mind improves their language skills.

xiii) Children don't feel bored in formal teaching and their co-operation enhances.

xiv) Teachers learn to implement GDAM to encounter the school problems and take research in co-curricular activities and innovation in audio-visual aids

Conclusion

Great value of discussion, talking, debate, elocution and group discussions is widely known which needs no comment. Children have the tendency


Identification of competencies and classification of groups for interaction
Competencies and pre-knowledge based topics and points for further discussion
Observation and group discussions on the topic with moderatory role of teacher
Implementation of GADM and a great use of scientific technique and demonstration
Free thoughts, encouragement, synthesis and assimilation of conclusions after analysis
Continuous and comprehensive evaluation or competition of each subject with a key on assignments
Masters
Non-Masters
Further enriched new activities
Re-discussion sessions and teacher's role play

1.2: Illustration of the process of GADM

to talk in free time or by stealing time during formal teaching or by using the phobia in playground irrespective of the subject matter Hence it is necessary for a good teacher to deal the children psychologically and befit the subject matter in their discussion to give them keen mastery of the subject or problem, topic, unit etc. The full revision of the books can be accelerated through discussions.

Duration, Practice and Details: During the period of four months i.e. from 'Dec 1st, 2002 to March 2003, the innovative practice in Standard IV of GPS Raili-Jajri, Hamirpur (H P) was practised and experimented successfully by the author

a) Management and Classification: First half of the day was selected as the time period to discuss EVS (Science, Social Science), Maths etc. and the second half for Hindi, English or languages, Moral Education, freedom struggle etc. with a view to hold class in the three groups called A, B, C. The students were awarded, trained and motivated to adopt a new learning strategy in a disciplined manner

b) Implementation of GDAM: Medium, average and brilliant ability students were divided into groups in right proportion. With a skill full observation of pre-knowledge and competencies of children, the topic was told according to the lesson plan With some type of question-answer approach, children easily judged the topic of discussion. With writing materials, children were asked to deliberate the matter and make some solid points about topic with their pre-knowledge and creativity. After sometime the children were asked to tell their views one by one.

c) Role of the Teacher: After assimilation of the views of children they were asked to discuss their preliminary views with each other. With a sport time discussion, serially group A,B,C, were told about the facts of the topic with a gigantic knowledge. Hence they were

Data Analysis

Sl No	*Evaluation Mode*	*No of Students*	*Duration*	*Student's Masters*	*Attainment & Non-attainment*
1	Observation (of student during GDAM)	39	1 hr	31(77%)	8 (23%)
2.	Oral discussion and test	39	1/2 hr.	27(67%)	12(33%)
3	Written Tests	39	1 hr	28(70%)	11(30%)
4	Co-curricular activites (Quiz/Drama/Other etc.)	39	2 hrs	30(75%)	9(24%)
5.	Assignments	39	1 Day	26(67%)	13(33%)

equipped with great knowledge and activities. Debatic form was introduced and children were keenly interested in the topic. After this, they were asked to follow their teacher in experimentation.

d) Special Activity Round: According to the understanding of the teacher and students, the activities are formed. Demonstration, debate, elocution logic finding and using present methods for research, co-curricular activities and knowledge based competitions are the activities which may be initiated here. Ample use of audio-visual aids proves worthy, hence done. Therefore the experience based 'Learning by Doing' was also followed. Games and activities can be adopted while teaching languages. It will be useful round for every child to become active listener

e) Focus on Subject: Every activity will focus on subject and topic eg. drama like *'Revolt of 1857'* in social science, *'Handwriting competition in Languages*, preparation of various mathematical tools and solving the puzzles, comprehension etc. So the topic will be accelerated with discussion, activities and so on.

f) Assignment and Test Observation: Observation will lead the whole GDAM. Then oral, written and competitions tests will prove worthy and will sum continuous comprehensive evaluation So after this, the assignments will boost to the knowledge gained by the children by expressing them in ideas and correct form which is useful in examinations and life practices.

Merits: Now this method is enriched and beneficial in —

a) teaching all the subjects at different levels of education, particularly at elementary level.

b) solving the problems of monotony of formal teaching, lack of interest and dull nature of school activities etc.

c) helping all the other methods may be used in classroom-teaching. Hence it is auxiliaric.

d) flexible teaching techniques composed of scientific and emotional approach depending on the subject.

e) attracting children to school, ending fear of punishment. It would help in achieving universal elementary education.

f) improving attendance of students and their capability in declamation, debates, reason finding, logic, dramatisation, research, synthesis and analysis, induction-deduction, projectation, making innovative material with elevated creativity and qualitative standards of education.

g) organizing co-curricular activities, effective preparation of appropriate audio-visual aids and attempting to deal the children with remedial teaching.

The Limitations

a) Unavailability of trained teachers and introvert nature of teachers and students Hence reluctance and hesitation may hinder.

b) Oral defects, language obtascles and lack of motivation.

c) Nature of children and problems of single teacher school, if one is not capable of handling the time table properly.

d) Time consuming and co-operative method.

> "Education can help ensure a safer, healthier, more prosperous and environmentally sound world, while simultaneously contributing to social, economic, and cultural progress, tolerance and international cooperation."
>
> **World Declaration on Education for All**
> **(Jomtein, 1990 p2)**

GDAM Cumulative Record of Class IV
Year 2002 Months: December 2002, January to March 2003
Evaluation Mode Assignments + GDAM.

Roll No	Group	Name of Child	Scholastic Tests (60)						Attained Marks/ Total Marks	Co Scholastic Tests (40)						Attained Marks/ Total Marks B+-below -20 A-Below 30 A+-30 40	Net Total Attainment/ Total Marks
			English 10	Hindi 10	EVS Science 10	EVS Social Sc 10	Maths 10	Moral Education 10	/60	Co-curricular Activities	Leadership	Reasoning and logic	Behave & cleanness	Concentration & habits	Health & Others		
1	A	Rampal	5	7	4	7	3	6	32	A	B+	C	B	C	A+	B+	32+B+
2	A	Madan lal	3	7	7	8	4	3	37	A+	B	A	B+	A	A+	A	37+A
3	A	Shyam Kumar	6	5	8	9	7	6	31	A	B+	C	C+	B	B	B+	31+B+
4	A	Surinder Kumar	3	2	3	3	4	18	A	C	D	C+	B+	A+	B+	A	28+A
5	A	Suresh Kumar	5	4	3	3	6	7	28	A+	B+	A+	B+	A+	B+	A	28 + A
6	A	Rajesh Kumar	3	5	3	9	9	8	37	A+	A	B+	B	B+	A+	B+	37+B+
7	A	Mohinder Kumar	7	5	3	3	4	7	29	B+	C	C	A+	C	B+	B	29 + B
8	A	Promila Devi	8	7	6	5	7	9	42	A+	B+	B+	C	B+	A+	B+	42+B
9	A	Usha Devi	4	5	3	3	3	5	23	A+	B	A	C	C	A	B+	23+B+
10	A	Santosh Kumari	7	3	3	4	5	3	25	C	B	C	B	C	B	B	25+B
11	A	Amit	3	6	3	9	3	5	25	C	B	B+	B	C	B+	B	25+B
12	A	Rekha	4	7	7	8	9	7	42	A+	A	B+	A+	A	A+	A+	42+A+
13	A	Kashal	4	6	3	3	2	3	20	B	C	B	D	B	B+	B	20+B
14	B	Surinder Kumar	3	5	3	3	6	4	24	B+	C+	A	B+	B	B	B	24+B
15	B	Amibka	7	3	5	5	5	4	29	A+	B	A+	A	A+	B+	A	29+A
16	B	Satvir Singh	4	4	3	3	3	3	20	C	C	A	A	A	B	B	20+B
17	B	Sher Singh	6	5	2	2	2	0	17	A	B+	B+	C	A+	B+	B+	17+B+
18	B	Pooja Kumari	3	7	6	9	8	7	40	A+	A	B+	A	A	A+	A+	40+A+
19	B	Aman Kumar	3	7	3	3	6	7	29	B+	B+	C	B+	A	A	B+	29+B+
20	B	Kuldeep Chand	5	4	3	7	8	9	36	A	B+	A+	B+	A	B+	B+	36+B+
21	B	Aman Kr Kumndal	6	5	7	7	3	7	35	A	A	B+	A+	A	A+	A+	35+A+
22	B	Shashi Bala	6	7	9	9	5	8	44	A+	B+	B+	A	B	A+	B+	44+B+
23	B	Ankita Kumari	6	8	7	3	2	7	33	A	B+	A	A+	A	A+	A	33+A
24	B	Ashish Kr	9	3	7	3	2	5	29	A+	A	A	A+	A	A+	A+	29+A+
25	B	Sunny Kr	9	8	7	6	9	9	48	A+	A+	A	A+	A+	A+	A+	48+A+
26	B	Sarita Devi	3	6	5	6	6	7	33	B+	C	B+	C	D	A+	B+	33+B+
27	C	Dheeraj Kr	9	8	7	7	9	6	46	A++	A+	A+	A+	A+	A+	A+	46+A+
28	C	Vinay	9	2	3	7	7	8	36	A	A+	A+	A+	A	A+	A+	36+A+
29	C	Ritu Devi	8	3	7	9	8	7	42	A	B+	B+	A	A+	A+	A	42+A+

30	C	Sapna Kumari	6	2	7	3	5	2	25	A+	A	A+	A+	A	A+	A+	25+A+
31	C	Pankaj	10	7	9	9	8	9	52	A++	A+	A+	A+	A+	A+	A++	52+A++
32	C	Manchal Kumari	6	3	9	8	9	8	43	A	B+	c	C+	B+	A	A	43+A
33	C	Babita Kumari	7	2	3	7	7	3	29	B	B+	B	B	A	A+	B+	29+b+
34	C	Pooja	7	5	9	8	9	7	45	A	A+	A	A+	A	A+	A++	45+A++
35	C	Pawan Kr	3	2	3	8	7	6	29	C	B	D	B+	A	A+	A++	45+A++
36	C	Parikshit	9	9	9	8	6	5	46	A+	A+	A+	A+	A+	A+	A++	46+B++
37	C	Sapna Kumari	7	6	7	8	5	7	40	A+	A	B	C	B+	A+	A	40+A
38	C	Umesh Kr	9	9	8	3	2	7	41	A+	A	B+	b+	A	A+	A	41=A
39	C	Annu	0	2	1	3	4	6	16	D	D	C	D	E	A	C	16+C

Signature of Experimenter
Date-

Signature of Headmster
(Designation with stamp
and Date)

Professional Development of Primary Teachers through Open and Distance Learning

S. Vincent De Paul
District Institute of Education and Training
Pudukkottai
T. K. Swatantira Devi
Department of Educational Technology
Bharathidasan University
Thiruchirappalli
Tamil Nadu

Professional development of teachers has to be a continuous process as teachers need to be acquainted with newer methods and developments that take place in the field. Use of open and distance mode for in-service teacher education has proved effective for training of teachers. This paper analyses the use of distance mode for in-service teacher education at primary level.

Introduction

India today needs competent, experienced an dedicated teachers to provide quality education, It may not be an exaggeration to say that the present Teacher Education does not satisfactorily provide such a quality education in the present day educational scenario The present system imparts a training knowledge which can not be applied in the regular class room practice In order to help them need based in-service programmes are being given in the cascade model which has resulted in transmission loss. Hence the aims and objectives of policy makers do not reach the gross root level. Realizing this, educational planners have developed strategies which can be given through open learning The commonly used mode is teleconferencing with one way video and two way audio Though this mode is innovative, it needs improvement. This paper discusses the precautions to be taken practically before transmission when such programmes for professional development of teachers are given for maximizing quality

Professional Development

Teacher's professional development may be viewed as a continuum commencing at entry in education and continuing with regular in-service development through teacher's career Nature and type of the teacher's professional development should not only satisfy the needs of the individual teachers but also the community around which they execute their profession. No doubt, all of us are aware that the professional development occurs regularly and naturally as a result of experience and reflection on that experience However to further enlighten it, the formal arrangement of teacher's professional development, ensuring quality is needed at this junction.

The following are essential for the maintenance and improvement of quality in teaching and learning. i) The type, content and duration of teacher training programme should ensure the best available preparation for teaching as a professional career. ii) Theory and practice developed both in colleges/ schools and training setting should be amalgamated iii) The teachers should be provided with appropriate and effective opportunities for their continued professional development throughout their career to meet their professional needs and needs of the system of school/college/institution where they are employed (Anand, 1999)

In-service Training and Professional Development

The necessity for an effective in-service teacher education programme is the same as that which implies all major public or private enterprises to make provision for staff development. This generalization is translated into reality with the frequency of in-service programmes for quality improvement The programme should.

i) keep attention focussed on the need for improved quality of educational outcomes through better performance,

ii) maintain an environment that would accelerate quality learning in school/ college/institution through teacher's own commitment,

iii) enable the teachers to develop the new competencies which they need to pursue in their career options,

iv) develop the concept of teaching as a profession offering career-long challenges, satisfaction and rewards and,

v) maintain the motivation and enthusiasm of teachers and other functionaries.

Present status of Programmes for Professional Development

The various agencies like National Council of Educational Research and Training (NCERT), National Institute of Educational Planning and Administration (NIEPA), State Councils of Educationnal Reseach and Training (SCERTs), and Distance Education Program of District Primary Education Programme of NCERT-IGNOU (DEP-DPEP) organize certain in-service programmes for key level educational persons in areas such as curriculum, methods of teaching, evaluation, educational technology and educational management. These key level resource persons train the district level educational personnel. Then the district level resource persons train the block level educational persons. Finally the block level resource persons give training to the field workers namely, the teachers who are in the field, meeting the difficulties in implementing the policy. This kind of in-service training does not allow training to over lakhs of teachers within the prescribed time and some important information are broken due to communication chain drop because of the above mentioned multilevel programmes.

Information Technology in Professional Development

In the present era, economic, social and cultural changes are accelerating in a rapid pace. These changes are often linked to the continuous process of scientific and technological development. Education also responds to these changes through its own reform and development The reform happening in teacher education constitutes part of the reform movement in education. In-service programmes offered now are sporadic and ad-hoc. Therefore we should give regular and periodic in-service training which can be achieved with the help of information technology that enables us to evolve sustainable programmes which in turn give concerted efforts to in-service education.

Teleconferencing (Interactive Television)

Though the teacher is considered as a distance learner, this programme model gives a feeling of getting education in the real class room. Television broadcasts are important means of presenting visual information for demonstrating skill of various kinds. Interactive Television helps in two way communication. Communication becomes more effective when role of transmitter and receiver oscillate in synchronization with each other. Communication is a dialogue (Borker, 1989). Communication provides feedback. The feed-back in communication process can be used to assess the direction and quality of learning (Borker, 1993). The Interactive Television provides all the essentials of communication.

In today's in-service experiments, two-way audio and one-way video technology has been used. Hence, trainees can clarify their doubts by raising questions which are immediately answered by experts who are presenting the programme on television. Teachers have got the opportunity of sharing their experiences with experts and teachers. This technology enables the teachers of schools of rural, remote and distant areas to interact with experts at national and international level.

Information Technology Employed in Indian In-service Education

Many studies have been conducted in India with special reference to primary school teachers The NCERT took up an experimental project sponsored by the Ministry of Human Resource Development, Government of Indian to train primary school teachers using Interactive Video Technology (one way video and two way audio) These programes were organized, two in Karnataka (20 centres), and one in Madhya Pradesh (45 centres) The Tele-SPOT (Special orientation of Primary School Teachers) programmes organised in Karnataka and Madhya Pradesh were each of seven days duration having 14 sessions These sessions were on various contextual issues and curricular areas

The Tele-Math's programme, conducted for five days duration has covered various hard spots such as place value, addition, subtraction, multiplication and division in Mathematics. Each session was about 210 minutes (120 minutes of live interaction and 90 minutes of individual group activities). Each session comprised of self-study, presentation and demonstration by experts, panel discussion ad teacher's interaction with panelists through telephone and fax

The Tele-Tamil programme of five days duration was conducted covering various skills of language, such as listening, reading and writing, grammar and composition in Tamil. Like the Tele-Math's Programme, this programme also had the same type of panel discussion and interaction In Tamil Nadu this programme was organized in all the District Institutes of Education and Training (DIET) having the infrastructure facilities to execute teleconferencing.

In the month of September, 2001, the Tele-Teacher Empowerment programme was taken by Distance Education Programme — District Primary Education programme (DEP-DPEP) in Tamil Nadu (7 centres) in collaboration with Indira Gandhi National Open University, New Delhi It was of three days duration covering various functions of Cluster Resource Centres (CRC), the role of CRC's coordinators, the way of conducting CRC meetings, action research and documentation and dissemination of activities in the CRCs Here also each session comprised of self study (12 chapters), presentation and demonstrations by experts, panel discussion and teacher's interaction with panelists through telephone and fax.

Professional Development through Interactive Video-Solving Practical Problems

The concurrent evaluation conducted in the above programmes indicates the significant gain in the achievement of participants. The experiment demonstrated the effective use of one way video and two way audio technology as an alternative to the conventional cascade model of training. This was evident when the author performed as a facilitator in the Tele-Teacher Empowerment programme. Since quality is a complex phenomenon, it needs quality of policy making, management, academic staff, support staff, participants, and material/physical resource (Ramanujam, 2000). The following practical problems should be solved in a pre-planned manner in order to maintain quality

1 Frequency of the Signal

Since the frequency provided by the studio at New Delhi is too low to receive, it gives more problems to the facilitators and observers Getting a signal has become a nightmare to the team members at the receiving centres. So the frequency which is easily catchable, i.e. similar to commercial satellite frequency should be followed The frequency provided by the broadcasting station will eliminate many pre-problems of the programme

2. Training of facilitators and observers

The facilitators and observers should have interest and positive attitudes towards the programme. One of them must be the concerned subject expert and another must be an expert in the technical field Both the facilitator and the observer should have mutual understanding. They should be trained how to receive the signal that is from the fitting of LNB in the antenna to receiving picture in the TV The resource persons are competent to handle the technical gadgets in which they are trained Even if there is a slight change in gadgets they are unable to manage the situation To avoid this care should be taken to install same types of gadgets both in training and receiving centres The other aspect of the training is that of providing an alternative method of imparting concepts to the in-service teacher, when some problems occur in receiving the signal. This strategy will reduce tension among the in-service training teachers and will make them sustain the programme

3. Participants

Primarily the success of the programme depends upon the interest the participants evince in the programme. The participants should feel that this programme is for their professional development. Those who have interest alone should be invited to the programmes. For others proper orientation and motivation can be given by even allotting one session. The panelist, the facilitator and observer should motivate the participants Only after ascertaining their positive attitude, programme should be carried on

4. Pre-day demonstration

Pre-day demonstration means telecasting the programme in the previous day of the regular session The team members should assemble together at the receiving centres and should view the programme one full day and should become familiar with the programme in order to ensure confidence among them This system will eradicate the problem faced due to failure, if any and avoid the disappointment among the team members.

Conclusion

In general Tele-conferencing mode is feasible to orient and train simultaneously a large number of individuals spread over the geographical regions with one team of four master trainees leading to the avoidance of transmission loss The success of the tele-programme wholly depends upon the quality, in order to attain the aims and goals of the programme This quality can be achieved only, if we keep in mind the above barriers and their possible alternative solutions. Two way audio and two way video Tele-conferencing and Computer conferencing should also be used as a tool for effective quality in in-service programme. Thus through open and distance learning, we can impart in-service training for the professional development of teachers.

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Teaching of Geography in Primary Schools through Inquiry Approach

Sarfaraz Alam
IDSA
Old JNU Campus
New Delhi 110 067

Scientific temper characterized by spirit of enquiry, problem solving, courage to question and objectivity leading to elimination of obscurantism, and fatalism while at the some time, sustaining and emphasizing the indigenous knowledge are among the major qualities school curriculum aims to promote among learners The spirit of inquiry would trigger the interest of children to learn by questioning. This paper explores the ways to teach Geography through inquiry.

The National Curriculum Framework for School Education (NCFSE) 2000, is a step in the right direction so far as social science education in schools is concerned The most important feature of this document is that it provides a challenge to curriculum developers and teachers to bring a change in social science education in order to make the subject more meaningful, practical and integrated So far geography textbooks for schools have been either a collection of facts intended to give a complete picture of a continent, a country, a state or a region and were in the form of a series of introductions to specialized subjects such as geomorphology, climatology, oceanography, economy, demography or sociology. As a result geography teaching had been oscillating between these two extremes (i e. regional and systematic geographies). The main problem with both the approaches was that they failed to sustain and augment the students' interest in the subject. As a consequence, the popularity of geography in the colleges and universities has been declining.

In this context, the National Curriculum Framework clearly departs from the traditional approach It recommends teachers to help their students learn geography through questioning approach: ' *students may be motivated to raise questions pertaining to various physical and man-made features, phenomena and events* '[1] The most important characteristic of this approach is that it will help students learn the fundamental concepts of geography As a result, they will apply in their day to day lives what they learn in the classrooms. In other words, there will be a carry forward from the school to the outside world. Their learning will be practical Therefore, the relevance of education will enlarge. Students' interest in the subject will also be far above what it has been earlier

The present article aims at presenting a teaching strategy for geography teachers of the primary school The approach that is being suggested in this article is the Questioning Approach. It is also known as the Inquiry Approach. To this end, a set of six questions that may be employed in the geography classrooms to teach any geographical features, phenomenon or event are identified. These questions are·

(i) What is it?

(ii) *Where is it?*

(iii) *Why is it there?*

(iv) *How has it evolved in time and space?*

(v) What will be the consequences of present spatial organization on people and the environment arising from them?

(vi) How should it (space) be managed for the mutual benefit of the humanity and natural environment?

'What' is necessarily a phenomenological question. Questions relating to 'what' deal with the subject matters of geographic enquiry or the kind of phenomena studied by the geographer. *What* are the phenomena studied by geographers and *what* are their characteristic features? Geographers are concerned with all the physical, biotic and cultural phenomena that occur in spatial distribution or found in spatial relations with each other In other words, geographers study any absorbed phenomena that are not uniformly distributed on the face of the earth. The observed phenomena may be physical (topography, streams and rivers), biotic (vegetation and animals) or human (villages and towns, roads and railways). Answering *what* questions necessitates an understanding of such basic geographical concepts as geographic phenomena/facts, scale, size, and shape

Once the answer to the question *what* has been settled and the nature of the subject of enquiry properly identified, the geographer is led on to find the *'whereness'* of the phenomena (i.e. spatial question) — *where* are the geographic phenomena located on the earth's surface? What is their spatial spread? Geographers ask *where* questions about all phenomena with which they concern themselves. Geographic phenomena are not just scattered over the face of the earth; but usually occupy definite places on the earth's surface *Where* questions are the most basic questions in all geographic inquiries. For instance, it is not enough to know that there are mountains, rivers, valleys, forests, and agricultural land. All must be located, delimited and placed relatively to each other These questions are asked in order to find out the locations and distributions of geographic phenomena on the face of the earth Maps provide the contexts of ordering phenomena on the earth's surface. Pursuing answers to *where* questions necessitate an understanding of such geographic concepts as of absolute and relative locations, site, spatial distribution, maps, scale, distance, directions and orientation

However, *what* and *where* questions are not end in themselves. Practitioners of modern geography consider answers to these questions as preliminary steps toward the complete understanding of an issue.

Once the various geographical phenomena have been located on the earth's surface the questions "*why* are they there?' and "*why* their a real extent is? what it is?" need to be considered Why questions are analytical questions To answer these, one must study the cause or causes for a particular distribution. Generally, the distribution of any particular geographical phenomenon is caused by a series of factors. Naturally some factors are not as important as others In answering the "*why*" questions, the student must be taught to give relative value to his reasons Pursuing of "why" questions require an understanding of concepts of spatial interaction and relationship among geographical phenomena.

How questions are processual questions that have to do with '...the sequence(s) of change systematically related in a chain of cause and effect."[2] *How* may be phenomena being studied be ordered and grouped? *How* are the phenomena organized in terms of their spatial structure and form? *How* were phenomena caused? *How* the geographical phenomena have evolved in space and time? *How* are they related to and interact with each other in a place? *How* are they connected to phenomena in other places? Explanations of processual questions come from both historical and contemporary sources. Pursuing answers to how questions necessitate an understanding of such geographic concepts as spatial organziation (i.e. pattern and process), spatial relation, region and system etc.

What will questions are concerned with prediction In what ways will space be organized in the future, and with what influence on people and their environment? What are likely trends and development in the future use of space?

How ought questions are concerned with prescriptions — what ought to happen or what ought to be done? *How ought* space be organized for the mutual benefits of society? In what ways should environment be managed for the mutual benefits of humanity and natural environment?

The above six questions represent fundamental elements of modern geographic inquiry. It is essential that teachers help their students develop an understanding of these skills of questioning to inquire about the geographical dimension any phenomena, features or events. These skills would help students' mastery over the subject. At the same time, they would be encouraged to apply their classrooms learning in their day-to-day lives and the experiences gained in the course of daily activities in the classrooms By doing so, they would live Geography.

> "Curriculum in schools has to develop the key qualities like regularity and punctuality, cleanliness, self-control, industriousness, sense of duty, desire to serve, responsibility, enterprise, creativity, sensitivity to greater equality, fraternity, democratic attitude and sense of obligation to environment protection". (P19)
>
> **National Curriculum Framework for School Education -2000**

1*National Curriculum Framework for School Education-2000*, (New Delhi: National Council of Educational Research and Training), p 66

2Preston E James, (1952), "Towards a Further Understanding of Regional Concept" Annals of the Association of American Geographers, vol XLII, no 3, p. 197

Strengthening the Mental Health of Family : Role of Parents

INDU BANSAL
Faculty of Home Science
VANDANA GOSWAMI
Faculty of Education, Banasthali Vidyapeeth, Rajasthan

Producing healthy and harmonious citizens is one of the prime aims of education. Family and school play major role in shaping the life of a child to be a healthy adult Family, being the prime and first institution has greater role and influences the life of the child Parents role becomes all the more important in bringing up children to be complete individuals. The authors here suggest ways to strengthen the mental health of the family through which the children grow as healthy individuals.

DEVELOPMENT of social, emotional, physical, moral and spiritual components of the personality of the child are important factors for the sound mental health. Maintaining good health of children and young is the prime responsibility of every nation Rapid technological changes, changed conditions of labour and industry, increase in amount of general education demanded, changed moral values and religious conditions, changing family patterns, complexity of decision making are some of the important factors for the substantial increase in problems of youths unrest, indiscipline, under and unemployment, religious and social hatred and intolerance, aggression, violence, drug addiction, etc. It tends to do the most psychological damage and give into real or imagined social pressure. This damage to the psyche can persist into adulthood and may be detrimental to individual, society, family and nation as well. It is a well established fact that parents can play an important role and have always been the strong external influence on the personality of the child.

Present article emphasises on what parents can do to develop a conducive and wholesome family atmosphere, can help the adults as well as others concerned with the welfare of youth and society to guide their wards towards social restraints and respon-sibilities, so to develop happy responsible citizens with sound mental health.

What is mental health?

Mental health may be described as adjustment of human being to the world, and to each other with maximum happiness and effectiveness. It is the ability to maintain an even temperament, an alert intelligence, socially considerate behaviour and happy disposition.

The individual functions as unit. Thinking, feeling, striving, simultaneously making use of and being influenced by varieties of abilities and characteristics. It is the integration of all the individual abilities and characteristics, both physical and mental, learned and unlearned which constitute his total personality and are the factors determining mental health Mental health is thus a dynamic functioning of the whole organism.

Characteristics of mentally healthy individual

It is necessary for every person to have some characteristics which determine his unique adjustment to environment and sound mental health.
These may be summarized as:

- Realistic goals, consistent with age and abilities
- Acceptance of responsibility
- Expression of appropriate emotions
- Ability to relate to others
- Acceptance of feelings
- Self esteem
- Continuing to learn how to learn
- Openness a new ideas
- Ability to make independent decision
- Creativity
- Trust others and trust themselves
- Competent and industrious
- Can guide others to grow or be creative in other ways
- Favourable self concept (feels or believes that he has been endowed by nature with his fair share of desirable characteristics)
- Deep sense of affiliation and involvement with one or number of groups
- Takes responsible pride in their accomplishments and responsibility for failure.
- Ability to tolerate a high degree of tension without becoming over excited or over reacting

It is also remembered here that besides many biological and bodily needs there are many more non physiological and psychological needs which are beautifully defined by Walter Mischel as:

- Abasement (to comply and accept punishment)
- Achievement (to strive and reach goals quickly and well)
- Affiliation (to form friendship)

- Aggression (to hurt others)
- Autonomy (to strive for independence)
- Counteraction (to overcome defeat)
- Deference (to defend and justify oneself)
- Dominance (to control or influence others)
- Exhibition (to excite, shock, self dramatise)
- Harmavoidance (to avoid pain and injury)
- Infovoidance (to avoid humiliation)
- Nurturance (to aid or protect the helpless)
- Order (to achieve order and cleanliness)
- Play (to relax)
- Rejection (to reject or dislike others)
- Seclusion (to be distant from others)
- Sentience (to obtain sensual gratification)
- Sex (to form an erotic relationship)
- Succorance (to ask for nourishment and love)
- Superiority (to overcome obstacles)
- Understanding (to question and think)

Factors contributing to ill mental health

The past 20 years have been marked by substantial increase in problems of student unrest, under and unemployment, wastage and stagnation, indiscipline, Racial and religious hatred, aggression, hostility, excessive violence and many more social crimes. The other factors contributing to this social scene are changing community values, peer groups, personal values of individuals, community pride

Unrealistic goals, excessive pressure to achieve more, inappropriate demands, severe criticism, condemnation for failure, ridicule or belittling or humiliating remarks, unfavourable comparisons, excessive punishment (specially when individual perceives it as unjust or unwarranted) lack of sympathy and understanding in times of stress or crisis, feeling of being unwanted, overprotection from failure or frustration, unstable conditions of home and community, inadequate moral standard of values and attitudes, authoritative attitudes of parents, frequent criticism, many restrictions, extra work, physical ailments and complaints, habitual underachievement, insecure early experiences, undue emotional stimulation, thwarting of impulses and desires, excessive use of defense mechanisms are some of the factors contributing to feeling of guilt, alienation, hostility and insecurity among children, hence contributing to many social and psychological problems.

The family factor is most likely to be with this maladjustment and other social problems. It is true that parents struggle to raise their children in the best possible environment.

Family and mental health

Any long range plan for reversing the pattern of society must involve the families and communities at macro level and children and women at micro level and family can playarole towards empowerment and actuation of equity in more holistic manner.

Living in society itself mean that we should maintain unity in diversity There may be many types of diversity as religion, philosophy, nation/state language, culture, civilization, living pattern, rituals and traditions, social attitudes, difference in ideas and ideals If we can not learn to live with anyone different, can not adjust with others, do not accept other's freedom of expression of ideas it will surely create an aggressive society with no tolerance for others

Everybody should have an attitude of compromise and tolerance which is the essence of positive mental health of family, an important factor in nation building It generally refers to all the interactions between the parents and their children including attitudes, values, beliefs, etc

Family life is an experience which is going on constantly in which adult as well as children are undergoing personality development It is important to emphasize this because of the wide spread acceptance of the idea that child's personality is relatively determined in the few years of life has carried with its implication that parent child relationship becomes fixed during the same period.

This is fortunately not true in the sense that relationship between the parents is changing constantly. Parents change their attitudes towards their children. Number of children increases so is the number and nature of personal relation With each child there is an increasing expansion and complexity of social interaction with in the family with more possibility on the one hand, for satisfactory stimulus and response The child is the future of family and no parent with the slightest interest in his child can ever be wholly unconcerned with the world of tomorrow, for it is in that world that their child will become an adult member and it gives most parents emotionally satisfying interest of life long duration. Nothing is perhaps more essential to a happy life than such interest

Furthermore many choices in expenditure of time and effort, in schools, in social contacts, in occupations, in forms of behaviours, in spheres of activities involving decisions representing value judgement are consciously or unconsciously imposed upon child by the family

Some times without appropriate family support children may never go through the identification process properly and may end up with a very confused orientation and perhaps a weaker super ego

Division of labour, growth of technology, increase in amount of general education demanded, changed condition of labour and industry, changing moral and religious conditions, need of specialization in every field place more pressure on proper utilization of human capacity which may be facilitated in warm supportive family environment where structure and control are regularly replaced with demands for self reliance.

Children learn by working with and by examining the object in their immediate family environment. Family determines values-personal, social and life, setting extrinsic and intrinsic motivational goals, efficiency, buildes relationship and prepare children for accepting responsibility for the future and society may be conditioned by the particular culture of families

Family has the responsibility in maintaining a condition of mental health and within the family greatest responsibility is on the women. It is in the family that the child learns to explain, express, control and refine or modify his emotions, thoughts, feelings and impression

It is for parents to prevent the child from treading into the wrong paths.

Parents should keep the following in mind to develop and maintain mental health of the whole family.

- Provide proper affection and love
- Provide conducive environment in the home
- Do not always criticize a child
- Do not compare the child with others
- Do not reject or overprotect a child
- Do not quarrel in presence of the child
- Do not be over anxious about the future of the child
- Be democratic in your dealings
- Meet the legitimate needs of your child
- Provide guidance where necessary
- Build confidence in your child
- Considering the child's limitations and strengths parents should help him set realistic goals for himself thus reducing his possibility of disappointment and increasing his chance of self realization because just as success breed success or at least feeling of success, failure breeds failure and isolation from peers and adults.
- Parents should know the kind of threatening situations there are to be anxious about and attempt to eliminate or keep them to minimum. Parents should know that under certain conditions, negative hostile behaviour is normal and to be expected, consequently they should register neither surprise nor shock, when a child verbalizes antisocial emotion and give him an opportunity to express their emotions in an acceptable manner.
- Build responsible individuals by encouraging responsibility in children Build self esteem and guide the child towards responsible decision making Children need acceptance to develop positive esteem.
- They should distinguish between the child's feelings and his overt acts and know when the later calls for sympathy and understanding and when they require firm disciplinary actions They should make an effort to achieve a balance between firmness and permissiveness in discipline. Children need to feel that there is consistency in their lives and a shared concern about them among the important people in their lives.
- Multicultural and non sexist experiences, materials and equipments should be provided for children of all ages

- Support their physical development and help them to learn healthy, nutrition and safety practices.
- Too often the parents (specially when the mother is working outside) feel that they do not have time and energy or psychological resources to respond to children's demand and are more permissive in their dealings which may lead to more anxious and stressed children with very less or no experience.

  Here parents need to recognize that children are attracted not by the independence of adulthood but also by the secure relationship of childhood dependence so they should try to provide a balanced environment of dependence as well as giving freedom to gradually make them self reliant
- Express your own views, unlike laying down the law which is likely to backfire, sharing your views with your children gives them a "home base" from which they can develop their own ideas.
- Keep the communication lines open - even if the immediate response of the child is anger towards those who disagree, rebuild relationship with the child after conflicts has gone on too long.
- Never launch personal attacks when children do something that displease the parents and respond to misbehaviour in the manner that will be most effective at that moment.
- Parents should maintain same loving attitude towards all children without any discrimination
- Finally develop a wholesome emotional climate which is very beautifully described in the following anonymous contribution.

  If a child lives with criticism, he learns to condemn

  If a child lives with hostility, learns to fight

  If a child lives with fear, he learns to be apprehensive

  If a child lives with jealousy, he learns to feel guilty

  If a child lives with tolerance, he learns to be patient

  If a child lives with encouragement, he learns to be confident

  If a child lives with praise, he learns to appreciate

  If a child lives with acceptance and friendliness, he learns to find love in the world.

  If a child lives with approval, he learns to like himself

  If a child lives with honesty, he learns what is truth.

  If a child lives with fairness, he learns justice.

  If a child lives with security, he learns to have faith in himself and those about him.

  If a child lives with friendliness, he learns that the world is a nice place live in.

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> "What is education? Is it book-learning? No Is it diverse knowledge? Not even that The training by which the current and expression of will are brought under control and become fruitful, is called education. True education may be described as a development of faculty, not an accumulation of words, or as a training of individual to will rightly and efficiently"
>
> **Swami Vivekananda**

Quality Educational Television Programmes for Children

HARMESH LAL
Sector A, Pocket A
Vasant Kunj
New Delhi 110 070

Use of media for educational purposes enriches learning experiences Production of quality educational video programmes relevant to the subject and to different stages of education would facilitate enriched learning experiences. This article discusses the various stages of development of educational television programmes and suggests ways to improve the quality of educational programmes.

Background

Television service in India was inaugurated on 15th September 1959, which was later launched on a regular basis on 22nd October 1961 in Delhi. A new era in the history of television in India started in 1975 when the satellite was used on an experimental basis for instructional purposes. Research studies reveal that television when combined with other learning experiences has proved to be an effective tool. The programme strategy should cover the needs as well as the interest of children so that it helps in increasing the knowledge in all the subject areas. The impact of eductional television on children has so far remained diffused. There is a long-felt need to review and to redefine the role of television to make it more relevant in their lives.

The characteristics of the target audience, practical constraints, the subject matter and the expected performance of the child are some of the ingredients to which the programmes should be basically concerned with.

In the present day competition of various channels, the child is baffled and is mainly fascinated by the glamour of feature films, chitrahar, soap operas, violent sequences and the attractive commercial advertisements providing very little scope for educational television progrmmes which have by and large jarring effect on children. It is, therefore, necessary to lay emphasis on the essential media characteristics which aim at improving the quality of programmes presentition such as use of animation, dramatization, puppets, cartoons etc. Variety of formats supported with evaluation may help to make the programmes more interesting and fascinating.

Progrmme production for the children should strictly be based on the well designed research approach and allow sufficient provision for pilot testing, especially when programmes are in a series mode. The programme may be designed not only for actual needs but it should also have a more realistic approach to the interest and psychology of the target audience. It is also important to find out how the children, for whom the programmes have been designed, are likely to perceive the message

ETV programmes need to be designed to address the problems of such children who are deprived of basic necessities, that means, ETV has to reach the unreached. Due to social factors this important section is at a great disadvantage and needs the posititve reinforcements through such innovative programmes

So far low priority has been given to children television both in terms of production and transmission depriving the large majority of children to access of TV programmes (for children). There is also a consciousness among parents about the type of programmes which are transmitted. The parents are more concerned with the children programmes which could link education to the environment and to make it more relevant and interesting to children such as adoption of dynamic methods of teaching and evaluation, emphasis on better teaching basic subjects of language, mathematics and environment studies, creation of scientific awareness and inculcating scientific attitude.

Till recently there has been no TV curriculum catering to the needs of the children. Producers assigned to produce children programmes planned the treatment without any familiarity with the eductional psychology and background of their audience profile, with the result that the programmes suffer in quality and the true sentiments are hardly reflected. The devotion and commitment to meet the aspirations of children and the appreciation and meeting their needs through TV programmes are the concerns of the policy makers, psychologists, media persons and the society as a whole. Through keen observation, one can easily identify what children like and what bores them, what interests them and why they switch off. It is therefore important to list out a few points which may help in improving the quality of programmes. The children will switch off TV, if they know the content is of no relevance to them. They would watch the programmes, if there is something beyond the textbooks and outside the boundaries of the school. The programmes should be interactive, based upon their activities and stimulate them.

If the team members responsible for the production and transmission of the programmes are in the same wave lengths, the programmes would be precise, authentic and logical and the children would watch such programmes with interest. There is a dire need for the high quality programmes meant for the children Such an objective is achievable, if the target audience for any programme is defined keeping in view the cognitive abilities so that it takes into account the attention span of children. Only then the educational television programmes can make a significant dent in the teaching-learning process.

The launching of Satellite Instructional Television Experiment (SITE) for school sector in 1982 and the setting up of State Institutes of Educational Technology (SIETs) in the States of Andhra Pradesh, Gujarat, Maharashtra, Bihar, Orissa and Uttar Pradesh (Kerala is a new addition - set up in 1999) the efforts to produce quality educational programmes have become serious One of the most important functions of the (CIET) Central Institute of Educational Technology, NCERT and the SIETs is to produce educational television programmes for children in the age group of 5-11 years and also for the teachers in primary schools. CIET is also now geared up to produce programmes for the secondary and senior secondry schools and the non-formal sector. This necessarily has oriented production of programmes based on syllabi for better comprehension of the concepts which cannot be taught through the textbooks

Mechanism for reviewing of the ETV progrmmes, produced by the agencies in the school sector, be developed so as to ensure their utility for the viewer target audiences and to take remedial measures to make the programmes interesting and useful for children and teachers.

In order to diversify ETV programmes new areas such as Computer as interactive audio-visual media, remote teaching virtual classroom through V SAT be explored. Education through media entertainment is the essence to remove boredom and to captivate the audiences The programmes can be planned for production in the magazine format. A magazine format can be defined as a combination of more than one format consisting different content areas in a logical sequence as variety of format break the monotony by presenting variety of programmes in one slot and seems to be sound for retaining attention. However the development of this format is a time consuming process.

The new technology like digital recording, non-linear editing and multi-media packages, internet facilities etc. to which some of the production centres have an access to, can help in enhancing the productivity which does not imply the number of programmes produced but also the optimum utilization of material and human resources. Monitoring and supervising the activities, coordinating, integrating all the efforts made by different organizations and developing an in-built evaluation system to measure the programmes and to improve the quality, are the other salient features. The parents of target audience are concerned about the type of programmes produced for transmission. As far as the quality of the programmes is concerned, particular programme should have all the media attributes and need-based The progrmme should include the content which the child will not normally find in his/her classroom for easy comprehension The programme should be produced with a professional approach of presentation. There is a dire need to evolve the strategy to popularize the programmes produced for the school sector and maintain the credibility of the production centers.

Doordarshan Kendra have issued the guidelines and instructions from time to time on the subject of preview of programmes before these are scheduled for telecast It has also been impressed upon the programme officers/incharges to thoroughly check during the preview, the programme content, viewers, scheduling time and occasions etc.

Production center has to keep the following broad aspects in view while looking at a programme

(a) **Topic** : Relevance, broad relationship with syllabi, extent of enrichment

(b) **Content** : Programme objectives, learning outcomes, topic and content, level appropriate to target audiences, information. Over/Under load, language words used, extent of updating/upgrading, enrichment for students/teachers, etc.

(c) **Script and Treatment** : Format, whether arousing interest, logical flow of sequences, use of participatory techniques, pacing, etc.

(d) **Production Value** . Format, visual appeal, music/sound effects, Presentation graphics/animation/ camera work and lighting.

(e) **Technical Value** · Video quality, audio quality, tape quality.

A sample of one or two programmes in the series could give an adequate idea about the appropriateness and quality of the series. The technical quality, particularly perfection of audio level and their matching from one sequence to the other namely video, telecine, etc. should be the hallmark of ech programme. The lighting should not be routine, flat or the one which lacks imagination. The style of commentary should not be dull or boring and stilted The presenters and artist should look natural and the quality of presentation be upgraded time to time. The commentary writing is a special skill. It should be precise in its statement and be lucid The words used must be such as target audience could easily follow. In case unknown/unusual technical words are to be used, these should be clearly explained and also if need be, put on screen. There is a tendency on the part of some producers to use puppets, animation and graphics without considering whether these actually help in communicting adequately without the use of such techniques.

(f) While the quality of graphics should be good, the planning and research for graphics needs to be done well in advance. The producer and the

Graphic Artist should plan together the style, number of graphics, details in graphics, format of dresses etc (if the figures are historical) covering what concepts, needs to be stressed/emphasized/explained more in continuity to suit the level of target audience. The activities that children could undertake should also perhaps be identified This also holds true for continuity and link programme.

(g) Producers should be asked to work in collaboration with well-known producers on a series mode This would be a good training exercise for doing studio programmes without spending much editing time on consoles and would give them insight of how production could be done swiftly, well and effectively.

The following tips are suggested.

(i) The programme notes, if meant for teachers should briefly state what the programme is about, its format, duration and difficult concepts and new words/technical words used in programme to which teacher should pay special attention They should also ideally provide ideas what further activities a teacher could plan with students to understand the concepts Subject experts who are associated with particular programmes, could be requested to suggest such activities as follow-up for teachers.

(ii) Special 2-3 day sessions from time to time, be held with producers/commentary writers in which 2/3 experts with educational and media experience will view their programmes In addition to seeing programmes, one or two good ETV programmes made by others could also be analysed. This would help both producers and commentary writers to give better insight into their work Incidentally, this would also help the producers to understand and work out ways in which very effective programme could be made by using simple techniques. This is not to say that puppets, graphics, animation, special effects etc should not be used. In fact additional, and improved equipment for computer animation, special effects, etc should be acquired by all the Production Centres. It is not correct to think that anything will go so far as education is concerned. All that one would like to ensure is that when using such techniques, information/skills could be conveyed just adequately by simpler means.

(iii) The most important aspect that the script writer/subject expert/producer must exercise is to define specific objectives and learning outcomes of each programme production At the end of the programme, the producer must check whether the learning outcomes verbalised earlier match with what has been depicted in the programme. This requires a better coordination between the producer and the subject expert.

(iv) Orientation Training Programmes for producers and senior functionaries who are directly involved in the production of programmes need to include the complexity of animation process in general and various aspects of educational technology in particular so that it could contribute in enriching their experience in the following aspects of eductional technology

- Knowing about latest equipment for cost effective uplinking
- Planning for future media strategies.
- Emerging technologies for the non-formal sections.
- Assessing the future technical requirements in terms of equipmet planning and procurement.
- Future trends of Educational TV services —both production of software and transmission strategies.
- Involvement of subject experts and interaction with the teachers, students and media persons for better programmes.
- Films vis-a-vis video and future of 166 mm film
- Informtion technology-building networks, internet and management of net costing.
- Media research—impact study of colour TV sets and RCCPs
- Areas of priority—ET beneficiaries.
- Integration of Media and curriculum and multi-media approach in production.
- ETV/Audio Production Management —from script to telecast and how to integrate
- Professionalism and methodologies to follow for incorporating research elements in the programmes.
- Updating knowledge for script writers and producers work culture

(v) State-of-art Technology.

Provision of fax, computers, Pentium hardware and software access to internet and communication through ET-Mail are some of the basic requirements which have been considered essential to the production centers.

New Technologies like digital recording non-linear editing and media packages, internet facility etc. can help enhancing the productivity. The productivity not only improves the number of programmes produced but also the optimum utilization of material and human resources For this purpose there is need to plan the activities in advance in organizing them, monitoring and supervising the activities and developing an in-built evaluation system to measure the progress for improving the quality from time to time.

(vi) Research and Evaluation

In order to encourage the production centers to start the inbuilt evaluation system for the ETV programmes, it is stressed to adopt neighbouring schools and conduct pre-test and post-test activities during the viewing. It is also desirable that the students and the teachers are interviewed so as to obtain their reactions on a particular programme. On the basis of the suggestions and feedback from teachers and students, necessary modifications can be incorporated in the programmes.

(vii) Continuity and Linkages

Important ingredients of production and transmission is the continuity and linkages The capsules are prepared by taking two or more programmes These are linked with each other in order to make the slot spontaneous, entertaining and enriching

The aim of providing continuity is to introduce the subjects with some activity the children can try on their own to introduce new related ideas, activities, experiments, riddles, small programmes on intersting subjects for the target age group.

Aspects of Production Management and Strategies for Quality Production

A. *Production Management*

(i) How to accelerate good ETV production also balancing simple production.

(ii) ETV production management - from script to telecast - how to integrate and manage system.

(iii) Quality and professionalism in media programmes/productions

(iv) What methodologies to follow for incorporating research elements in programmes.

(v) Overview of trends in communication research including use of information technology.

(vi) How to sensitize producers to derive benefits of media research.

(vii) Project planning, implementation and monitoring.

(viii) Better/optimum utilisation of facilities and programmes.

(ix) Effective communication of research/evaluative study findings

(x) Updating knowledge of scriptwriters and producers.

B. *Utilisation*

(i) ETV awareness

(ii) Wider reach/access to actual/real target group

(iii) Orientation to teachers and inspecting officers to effective utilisation of education services through media

(iv) Areas of priority

(v) Access to resources, delivery systems, latest technology

(vi) Problems in ETV monitoring distribution utilistion

(vii) Utility - coverage

C. *Team Mode Working*

(i) Integration of media and curriculum

(ii) Is ETV a part of time table in schools?

(iii) Integration of media in education system

(iv) Multi-media approach in production

- Next 10 years
- Next 15 years

D. *Future*

(i) Latest equipment for cost effective uplinking planning for future - media strategies - media mix

(ii) More time on DD's national channel

30 mts - 45 mts

5 days - 6 days

(iii) Better facilities for the dissemination of programmes produced in terms of technological aspects (through terrestrial broadcasting)

or Satellite Broadcasting

or Cable mode of transmission

or Computers

(iv) Can the new technology do something for the non-formal sector?

(v) Future prospectus and planning

(vi) What are the future trends of educational television services?

(vii) How the cooperation of Doordarshan Kendra (DDK), AIR, IGNOU and DECU-ISRO is defined for the future in terms of extending broadcasting facilities?

E. *Technology*

(i) State-of-art equipment for shooting and editing

(ii) Modern trends in photography and graphics

(iii) Films vs video production

(iv) Films vis-a-vis TV

(v) New technologies in production

- In next 10 years
- In next 15 years

(vi) Is the new technology cost effective?

F. *Information Technology*

(i) Dissemination and explosion of knowledge - How to meet the challenge?

(ii) Frequent interaction with other media organisations

G *Some Guidelines of preview of ETV Programmes*

1 Objectives of the programme - How far these objectives have been achieved?

2. The target audience - is the content all right and appropriate?

3. Level of comprehension

4 Language, visuals - long/close shots, clarity appropriateness

5 Pace - speed of presentation

6 Child characters and adults - comments on characters, non-human characters

7 Commentary -its appropriateness, child contracts their identification for production programmes

8. Format

9. Music background or lyrics, graphics and set used in the programme.

10. Duration/time - is it appropriate?

11. Whether the programme is self-contained - it needs to be supplemented further

12 Make-up not artificial to the rural child

13 Camera work

14. Lighting

15 Editing

16. How far is the programme appealing to the child? If it needs testing with the children, it is ideal situation - whether it is fit for transmission?

Identification of Visual Perceptual Disabilities in Children at Primary Stage

B K Sharma
Rajive Kumar
Department of Education
Chaudhary Charan Singh University
Meerut, U P.

Early identification of problems of children would help teachers and parents of children to pay special attention to them for making learning effective This paper describes how visual perception disabilities could be identified.

Visual perception is involved in nearly every action we undertake. Proficiency in visual perception helps children to learn, to read, to write and to spell, to do arithmetic and to develop all the other skills necessary for success in school work and later, success in career and life at large This paper, defines visual perceptual deficit children and their identification

Not all children identified as learning disabled evidence visual perceptual problems. To the reader for whom this text is his very first exposure to the field of learning disabilities, the above statement will probably seem so logical as to be a trifle trivial We have chosen to begin this paper with such an assertion, however, in order to alert the introductory student to one of the most common misconceptions in the area of learning disabilities. Though it should be obvious that children can have learning problems for a variety of reasons, in some circles the term "learning disabilities" is synonymous with the term "visual perceptual disabilities". On the other hand, in defense of their positions, advocates of visual training often sound as if they believed that all learning disabled children had visual deficits.

The common view holds that (a) not all children with learning problems have visual deficits, (b) some children with learning problems have *visual deficits, and (c) the remediation of visual perceptual disabilities may help* in the remediation of the child's learning problems The question of the efficacy of the various visual training programmes in an empirical one and should not be confused with the fact that some children find it difficulty to learn because of visual perceptual disturbances Given that some children who perform poorly on educational task do so for reasons other than visual perceptual deficits, it is not surprising that research in which such children are not carefully eliminated for the study may show visual perceptual training to be of little value

Visual Perception Disabilities

Children with learning problems manifest numerous kinds of visual perceptual disabilities The most common problems will be discussed in form, position in space, visual closure, visual coordination and visual memory These particular disabilities have been chosen because they are among the most frequently cited visual problems and are deemed influential in contributing to academic disabilities. Another disability-figure-back-ground (the difficulty in differentiating between figure and background) could be included here.

(1) Form Perception

Perhaps the most basic visual discrimination that the child makes is that of the perception of the property of form. Whether it be the differentiation of the letter B from P of the shape of a ball from a block the ability to perceive the shape of objects and pictures is an important skill for the developing child to obtain.

(2) Position in Space

The ability to perceive the particular spatial orientation of stimuli in the environment has come to be known as "position in space" ability. Position in space ability can be thought of as a more refined or particular kind of form perception ability. The child with this disability has problems with the relative position of stimuli.

The classic example of a position in space disability is that of the child who has a strong tendency to reverse letters or whole words while reading For example, he might read "been" instead of "den" or "was" instead of "saw".

(3) Visual Closure

Another disability of visual perception frequently attributed to children with learning disabilities is visual closure ability Concern for visual closure originated with the work of the Gestalt psychologists who were interested in how individuals formed visual "holes" or Gestalts of forms. Visual perceptual psychologists working on the Gestalt theory have conducted a number of experiments in which stimuli are presented with parts missing. The subjects are then asked to identify the object. The reader can grasp the general idea of what is involved by writing a few words or drawing a picture in pencil on a paper and then running his eraser through it a couple of times. If shown just the final product, an individual must provide the missing information himself in order to recognize the picture or words [2]

(4) Visual-motor Coordination

Children who have visual-motor problems experience difficulty when they are each for items, dress themselves, or attempt movements which depend heavily upon visual adequacy.

(5) Visual Memory

It is the ability to recollect the dominant features of a stimulus item or to recall the sequence of a number of items presented visually. Children with deficits in this area cannot easily differentiate the letter R from P, or the shape of a block from a ball In reading, the discrimination of letters is a crucial skill.

Identification of these children

Education promotes the development of the child's physical and psychological functions Without perception a human being can not receive any message from his environment or respond to it

The enjoyment of art, of nature, of the world around us, depends on the refinement of our perceptual skills-auditory visual, kinesthetic, tactile-but it is visual perception that is primary the medium though which human beings encounter their environment

The children having visually perceptual disabilities can be screened out by the following tools/instruments

- **Background Information Performa:** This performa can be used to understand the developmental history of children. It contains basic preliminary general information about the children regarding their age, place of the living, some information regarding family It also gathers information on birth and developmental history, medical history, social and personal factors and educational factors
- **School Records:** Academic performance of the children can be measured by classroom test and academic records of the children.
- **Checklist for Teachers:** (Functional Assessment Guide-prepared by Special Education unit of NCERT, 1990 under UNICEF project). The checklist consists of 12 statements regarding their appearances and behaviour patterns.
- **Symptomatology Checklist of Visual Perceptual Deficits:** (Dr. Joan Harwell) The checklist consists of 17 behaviours based on visual perceptual deficits, which have to be checked by someone who knows the child well.
- **Developmental Tests of Visual Perceptions:-** (by Marriance Frosting' Welty Lefever and John R.B. Whittlesey (1966), There are five sub tests in an attempt to measure a variety of visual perception skills-
  - (a) Eye-Motor or Visual-Motor coordination
  - (b) Figure-Ground
  - (c) From Constancy
  - (d) Position in Space
  - (e) Spatial Relations

When we are looking at the specific learning difficulties a child may have, we should analyze the process involved in a given task quite carefully. Considerable information may be obtained in this area by using above instruments and tools Over the last twenty or thirty years difficulties in this area have received much attention. It has increasingly been recognized that difficulties in visual perception can affect learning in the classroom. We can now hope that the next few years will bring some fruitful research in these areas which might result in consolidation of opinion

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All India Competition for School Teachers and Teacher Educators on Innovative Practices and Experiments

National Council of Educational Research and Training (NCERT) invites innovative papers from school teachers and teacher educators The paper can relate to solving classroom problems, improving methodology of teaching, organizing curricular activities and effective utilisation of institutional resources, etc If you have conducted any such experiment or practice, prepare a paper in detail and send three copies of the same along with its summary to the Principal, Regional Institute of Education of your region

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When we are looking at the specific learning difficulties a child may have, we should analyze the process involved in a given task quite carefully. Considerable information may be obtained in this area by using above instruments and tools Over the last twenty or thirty years difficulties in this area have received much attention It has increasingly been recognized that difficulties in visual perception can affect learning in the classroom We can now hope that the next few years will bring some fruitful research in these areas which might result in consolidation of opinion

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All India Competition for School Teachers and Teacher Educators on Innovative Practices and Experiments

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THE PRIMARY TEACHER

विद्ययाऽमृतमश्नुते
एन सी ई आर टी
NCERT

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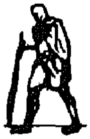
Gandhiji's Talisman



I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test:

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny? In other words, will it lead to Swaraj for the hungry and spiritually starving millions?

Then you will find your doubts and your self melting away.

mkGandhi

Editorial

This issue of the Primary Teacher brings some pertinent topics and themes of relevance to primary teachers, teacher educators, researchers and those interested in and concerned about school education, particularly elementary education. The research papers cover varied themes which include interest of prospective teachers, effect of video intervention on the achievement of students, attitude of children towards mainstreaming, conservation of kinship roles among rural boys and relationship of personality and personal factors with job-satisfaction of primary school teachers. These researches by experienced teachers and teacher educators would serve as a base for gaining enriching experiences for teachers and teacher educators to deliver the best in the classrooms Other themes of the issue are also of importance as they help the practicing teachers to better their strategies by using the novel ideas presented in the papers. The Art of Healthy and Productive Living (AHPL), the inter-disciplinary subject area recommended by *National Curriculum Framework for School Education—2000* is discussed in detail This subject area needs to be taken seriously with proper planning to conduct activities, stresses the paper. Use of drama for development of children, problem of single parent cared child, tips for parents and teachers for purposeful education are a source for teachers to learn and use them in their classrooms. This issue also finds a review of the book on Art of Healthy and Productive Living: the handbook for teachers published by the National Council of Educational Research and Training as a guideline for teachers to deliver the subject area, Art of Healthy and Productive Living This review would serve as a way for dissemination of the idea about subject

As mentioned in our earlier issues, the Primary Teacher proposes to introduce few new features in the forthcoming issues This may include a feature covering an interview with educationists, educators and philosophers in school education on relevant and pertinent issues and a special feature on the life and achievements of Indian educators, educationist and pioneers in school education. These new features would be of inspiration for teachers and teacher educators who shape the future of the nation.

The Primary Teacher earnestly requests teachers and teacher educators and readers of the Journal to send review of recent books in the field of elementary education

R. Meganathan
Academic Editor

CONSTITUTION OF INDIA

Part IV A

Fundamental Duties of Citizens

ARTICLE 51A

Fundamental Duties – It shall be the duty of every citizen of India —

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem,

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom,

(c) to uphold and protect the sovereignty, unity and integrity of India,

(d) to defend the country and render national service when called upon to do so,

(e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diverstities, to renounce practices derogatory to the dignity of women;

(f) to value and preserve the rich heritage of our composite culture,

(g) to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures;

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform,

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement.

Interest in Teaching: A Study of Prospective Teachers

MEENAKSHISUNDARAM*
C. GANDHI**

Teachers who are committed to the profession, children school and subject, i.e knowledge, are the need of the hour to produce healthy and bright citizens to lead the nation Teachers' interest in teaching is one of the most important factors to instil interest among children in school This study conducted among the prospective teachers reveals that changes need to be effected in teacher education curriculum to produce committed teachers.

Introduction

Teaching interest has been found as one of the major determinants of teacher effectiveness (Grewal 1975). An individual's beliefs, attitudes, values and overt behaviour are profoundly influenced and moulded by his interest Interest in teaching is a major concern in educational programmes. Unless a teacher is interested in his job, subject and his pupils, he can never do justice to his profession No aptitude test or a test to determine interest in teaching is used while admitting prospective teachers for training in teacher training institutions. Consequently it need not be necessary that those undergoing training have the required bent of mind aptitude necessary for teaching It is imperative to ensure that prospective teachers undergoing training in teacher training institutions have the necessary aptitude or interest in teaching In the present study, an attempt has been made to study the interest of teacher trainees in teaching undergoing Diploma in Teaching (DTE) course in Tamil Nadu.

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* *Selection Grade Lecturer*, LCE, Gandhigram 624 302, Tamil Nadu

** *Senior Lecturer*, District Institute of Education and Training, Oddanchatram-624 619, Tamil Nadu

Objective

The present investigation was undertaken with following objective.

To find out whether the teacher trainees differ significantly in their interest in teaching in terms of certain biographical variables.

Hypothesis

There is no significant difference in the interest in teaching vis-a-vis gender, marital status, native place, type of family, family size, place of school, type of management, mode of admission, getting scholarship, selection under special quota and place of residence

Methodology

The study was conducted on a sample of 350 teacher trainees undergoing DTE course in 5 Teacher Training Institutes (TTIs) and 2 DIETs in Dindigul, Theni and Coimbatore districts in Tamil Nadu. The Kakkar Interest in Teaching Scale (KITS, 1984) was administered to the above sample towards the end of their training course The tool consists of 27 multiple choice type items Every correct answer yields one score. The maximum score would be 27

Analysis of Data and Discussion

The means and standard deviations were computed for the different sub-samples viz male and female trainees, etc. to find out the significance of difference between the sub-samples the 't' test and 'F' test were employed.

From Table-1, it could be observed that there is significant difference in the interest in teaching of student teachers, married trainees proved to be more interested in teaching than their unmarried counterparts. The rural student-teachers are significantly more interested in teaching than urban trainees Student teachers of urban institutions are more interested in teaching than their rural trainees Those from unrecognised institution are more interested in teaching than their counterparts in recognised institution

The comparison of interest in teaching of the teacher trainees among the type of institutions (boys, girls and co-ed , institutions), parental occupation (Both parents employed, father only employed, mother only employed and both parents not employed) and subjects' background (Arts, Science and Vocational subjects) was done by one-way ANOVA. The details of the analysis are presented in table-2

In table-2, it is observed that the F-values were not significant even at 0 05 level of probability. Therefore, it could be conducted that the interest in teaching of student trainees was not influenced by their type of school, parental occupation and their subject background. Thus among sixteen criterion variables, four variables viz marital status, native place, place of school and mode of admission, could significantly influence the interest in teaching of student teachers

Conclusion

Married teacher trainees were more interested in teaching than their unmarried counterparts The reason that could be attributed to this may be married persons were emotionally settled in marital life. Perhaps, this may be the

Table. 1
Summary of significance of difference between the means of interest in teaching scores

Sl. No	Biographical variables	Sub-samples	N	M	SD	't' value
1	Sex	Male	157	10 229	4 222	1.23
		Female	193	10.7565	3 797	
2.	Marital status	Married	49	12 0204	3 425	3 23*
		Unmarried	301	10 2724	4 034	
3.	Native place	Rural	233	10 8627	3.754	2 18*
		Urban	117	9 8291	4 375	
4.	Type of family	Nuclear family	212	10 3585	3 884	0.91
		Joint family	138	10 7609	4 165	
5	Family size	Small family	155	10.2645	4 369	1 03
		Large family	195	10.7179	3.672	
6	Place of school	Rural	231	10 1126	4 052	2.72*
		Urban	119	11 3025	3 779	
7	Type of management	Govt institution	191	10 4660	4 354	0 27
		Aided institution	159	10 5786	3 532	
8	Mode of admission	Unrecognised	49	11 6122	3 481	2 32*
		Recognised	301	10 3389	4 051	
9.	Getting scholarship	Scholarship holders	140	10 7071	4.153	0 72
		Non scholarship holders	210	10 3905	3.893	
10	Selection under spl Quota	Under spl. Quota	45	10 7778	4 221	0 45
		Under normal norms	305	10.4787	3 968	
11	Place of residence	Hosteller	302	10.5662	4 020	0 59
		Day scholar	48	10 2083	3 870	

* Significant at 0.05 Level

Table 2
Summary of ANOVA of interest in teaching of teacher trainees

Sl No.	Biographical variables	Source of variation	df	SS	MSS	'f' value
1	Type of school	Between groups	2	53.0288	26 5144	1 6666
		Within groups	347	5520 3683	15.9088	
		Total	349	5573 3971		
2.	Parental occupation	Between groups	3	24.5709	8.1903	0 5107
		Within groups	346	5548 8262	16.0371	
		Total	349	5573.3971		
3.	Subject background	Between groups	2	54 6765	27.3382	1.7189
		Within groups	347	5518 7207	15.9041	
		Total	349	5573.3971		

reason for this result Rural teacher trainees proved themselves as more interested in their teaching. In rural areas, generally people find the teachers as their role models Perhaps, this may be the reason for this result. The teacher trainees were more interested in teaching in institutions located in urban areas than institutions in rural areas. Some students joined unrecognised institutions and could not continue their Diploma, but got admission into recognised institutions. They have more interest in teaching than those who joined directly in recognised institutions

> The role of education is to improve the material standard of the people and to enrich the quality of life. Besides knowledge and skills, education should be also concerned with the 'inner content' of our lives, with ideals and idealism and strengthening of the spirit We need a balance between three overlapping divisions of education (at all levels) which may perhaps be described as: *tactical, strategic and humanistic.* The first refers to theoretical and practical knowledge of immediate and short-term utility, the second to knowledge of life-long utility and value, and the third relates to quality and meaning of life
>
> **D.S. Kothari**
> **Education for Developing Countries in a World in Transition**
> **Report of the University Grants Commission, 1972**

Comparative Achievement of Students: A Study of Video Intervention in Different Localities

RAJENDRA PAL*

Use of new technologies in school education is a boon for sustaining the interest of children and enhancing their achievement. This research study conducted in different localities with the use of video programmes shows that use of the technology would help in the improvement of achievement of students

Introduction

Television has been a potential medium of learning for children in formal classes, distance education and open learning system. Researches have established the educational worth and effectiveness of the Tele-media.

One of the national objectives for the introduction of TV in the realm of education in India was to strengthening the drive for Universalization of Primary Education in the country. Presently the attempt is made through implementation of Sarva Siksha Abhiyan

The methods and practices of educational television are rapidly evolving in the wake of changing curriculum and newly developing communication alternatives. As a result, television is utilized in every aspect of life. Due to rapid growth of knowledge and explosion of population, a great deal of change is taking place in all walks of life. Television, being a catalytic force is increasingly used as an alternative and independent approach to teaching-learning process

Need of the study

Use of television can improve teaching and learning. But just having a television or a VCR doesn't automatically translate

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* Lecturer, Central Institute of Educational Technology, National Council of Educational Research and Training, New Delhi-110 016

to better instructional outcome. It depends on the software (Video programmes) chosen, student activity with the software, and how teacher structures and supports technology based learning, and whether there is sufficient access to the technology. Most important is the use of software with the correct learning environment. Although researches on educational television are no dearth, yet different dimensions of the ETV studies have not received equal emphasis, especially the effects of direct video viewing in the classroom on learning the specific curricular concepts with different localities

There are studies showing the positive effect of video programmes on the achievement of students But meta analysis of 100 ETV studies by Goel and Sarangi (1992) revealed that ETV did not produce much cognitive effect However, for long term viewers ETV effected higher classroom achievement with different score pattern for different age groups Thus ETV whether an efficient supplementary or complementary agency of education still remains inconclusive.

There are researches studying the effectiveness of ETV programmes on achievement of students in various subjects. But sufficient evidences have not been found to measure the effectiveness of ETV programmes produced in Indian situation and compare with various localities Hence, the attempt was made to compare the learning out comes of students in rural and urban areas in some of the basic concepts of mathematics by the selected ETV programs produced by Central Institute of Educational Technology (CIET) of the National Council of Educational Research and Training, New Delhi, India.

The Design

In this study pre-experimental (one group pre-test post-test) design was employed to assess the effectiveness of the ETV programmes. The independent variable of the study was ETV programme shown through direct video viewing mode. The dependent variable was achievement of the students in mathematics on selected concepts

CIET produces programmes mainly for two purposes i e telecast and non-telecast Its programmes are being telecast on National Network (DD-I) and exclusive educational channel *'Gyan Darshan'*. The present study was conducted in non-telecast mode because in telecast mode many variables are not under our control.

The Urban Localities

The schools at urban areas of Jaipur were chosen within four to five kilometers from the main railway station and bus stand of Jaipur City This is a minority populated economically disadvantaged area There are 5 to 7 primary schools in a radius of one kilometer Two schools selected for the study were very near to each other One school was co-education school and other was only for girls Therefore, children need not to walk longer to reach the schools; also number of children in a class are manageable. The selected government schools were in congested area There was no playground for the children because the schools were on the main road The schools chosen from this locality were Rajkiya Prathmik Vidyalaya, Pannigran and Rajkiya Prathmik Vidyalaya, Motikatla

The Rural Localities

The rural area selected for the study was around 35 kilometer away from the railway station or bus stand of Jaipur city There are three schools in this big village one private and two government schools which are very near to each other There is drinking water facility in school and a hand pump was there in the other school There is no playground in one of the schools whereas students of other school utilize the empty field as playground The schools are in the reach of children The schools chosen from this locality were. Rajkiya Prathmik Vidyalaya, Malyan Dhani, Rajkiya Prathmik Vidyalaya, Achrol and Rajkiya Prathmik Vidyalaya, Dhingpur

The Sample

The sample consists of a total 163 students of class V out of which 88 students were from two schools of urban area and 81 students were chosen from three schools of rural localities of Jaipur District, Rajasthan. The three schools were selected from three different villages Only those schools were chosen where electricity facility was available. However, the provision of generator was also made in case of power cut.

Selection of the Programmes

The programmes produced by CIET for primary stage can be categorized in two stages of children i e 5 to 8 years and 9 to 11 years The first category of programmes cover the content of classes I, II and III and the second category for classes IV and Vth. There were 10 programmes selected for the students of class V from the second category of the programme

Description of the Video Programmes involved in the study

Doori *(Distance)*: The programme explains the concept of distance by using the examples of day to day life. The programme started with a puppet who is trying to define the concept of distance, smaller distance and larger distance with discussion. The scale of Kilometer, Meter, Feet and its sub units are shown for measuring the different lengths for different purposes

Kshetrafal *(Area)*: The programme presents the concept of area It starts with a problem of measuring and comparing the areas of two plates and the problem is solved through calculation of different squares and the covered area is called kshetrafal So many other processes are shown for the calculation of big and small areas The formula of measuring the area is also shown and illustrated in the programme.

Aayatan *(Volume)*: This programme shows the concept of volume It explains that every small or big thing have their volume It presents the process of measuring volume with examples of daily life. The format of this programme is narration-cum-illustration The example is shown with the help of glass of water and a small and big stone and it concludes that space covered by any thing is called volume The way of measuring the volume is also explained with the help of one square centimeter The volume of liquid is measured through letter and millimeter.

Bhar ***(Weight)*** **:** The programme starts with some examples of weight like utensils, sweets and toys After that the concept of weight (Batt) one kg, 500 grams, 200 grams, one grams, two grams etc were discussed with examples of different shops The special kind of big balance is meant for the measurement of big and heavy bags like 50 Kg, 100 Kg., etc. The heavier things like trucks, trolley weight is measured through electronic machines.

Labh Ya Hani ***(Profit and Loss):*** This programme describes the concept of cost price, selling price, profit and loss with examples of daily life situation. The format of this programmes is illustrated through drama. The situation of market is shown where the children are shopkeepers and customers The expenditure of buying the things is called cost price, and the money collected through selling the thing is called selling price. In the same manner the concept of profit and loss is explained. In the last portion of this programme, a story on profit and loss is shown with the help of animation

Bhinnonka Jod ***(Division of Fractional Numbers):*** This programme describes the concept of different part of shapes and the method of addition of fractional numbers and its use in daily life A method of addition to two fractions with equal denominator has been shown This is done by colouring a figure having eight equal parts of which two parts are coloured first and then four parts are coloured So this shows 2/8+4/8 =6/8.

Dashmlave Bhinn ***(Decimal Fraction):*** The programme shows the concept of decimal fraction through different examples like weights, rupees and scales etc. viz. Meter is divided into 100 cms. and 1 cm is divided into 10 mms The concept is further explained through different fractions like 3/10, 1/100, 5/1000 etc. The way of writing the different parts of a whole is also elaborated.

Rekha Ganit ***(Geometry):*** The programme describes the concept of straight line and parallel lines and their use in day to day life. The parallel and vertical lines are explained in detail with so many examples

Development of Achievement Test and data collection

Achievement tests were developed keeping in view the learner's understanding, content gradation and minimum levels of learning (MLL) competencies covered in the programme. While developing the items the following points were kept in mind (i) items were based directly on the concept/information covered in the programmes (ii) as far as possible the mathematical problems were presented in visual/graphical form because of the lower class The number of items varied from 8 to 10 per test. The same test was used as pre test and post test.

The programmes were taken in the form of cassettes. The experiment was conducted for selected schools of rural and urban areas of Jaipur, with the help of local DIETs and SCERT, Rajasthan The achievement tests based on the ETV programmes for the children in the age group 9-11 were administered on the students of class V

The Result and Findings

The locality wise data related to gain achievement of students is given in the table below.

The table shows that calculated value of 't' is not higher than the table value for all the programmes. It means that none of the programmes is found to be significantly different as far as rural and urban area is concerned.

This is an encouraging and motivating finding for those persons responsible for the media production at CIET. One can assume the various reasons of not finding significant difference in the programmes as far as localities are concerned.

- While producing the programme the various factors affecting the achievement of students of various localities were taken care of.
- The students were equally exposed to the factors affecting achievement at different localities.
- The language of the programmes were so designed that students from all the localities were able to understand.
- Context-specific examples were taken from both the environments.

TABLE 1

The mean, Sd and 't' value for the gain score of achievement of class V students at rural and urban areas of Jaipur

Sl No	*Title of the Programme*	*Urban N=83*			*Rural N=82*			*'t' value*
		Gain	*Mean*	*Sd (**s**)*	*Gain*	*Mean*	*Sd (**s**)*	
1	Doori	77	1.0122	1.864	83	0.928	1.596	0.045*
2	Kshetrafal	-89.5	1.628	1.5	133.5	-1.08	3.625	1.196*
3	Ayatan	312	1.7378	1.4	142.5	3.759	2.987	0.965*
4.	Bhar	103	0.8171	0.12	67	1.241	0.215	0.7324*
5	Laabh ya Hani	-6.5	0.5915	1.288	48.5	-0.08	2.029	0.369*
6	Bhinnatmak Sankhayian	82	0.3354	1.104	27.5	0.988	2.469	0.3453*
7	Bhinnon ka Jod	99	0.7988	1.687	65.5	1.193	1.929	0.2073*
8	Dashamlav Bhinn	96.5	0.0244	1.259	2	1.163	1.736	0.6579*
9	Rekha Ganit	138.5	0.4451	1.126	36.5	1.669	1.792	0.7165*
10	Aakaron Ki Duniya	155	0.1951	1.283	16	1.867	2.187	0.8975*

Note· *'t' value is not significant

The contents of the programme were supplementing to the text book used in both the localities

However, these are only hypotheses If some one really wants to know the reasons he/she may investigate the causes which are responsible for equal effectiveness of the programmes so that media personnel can take care of the factors

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Creative Drama for Development of Children in Primary Schools

CHARRU SHARMA*

Drama is an effective medium for teachers to communicate the concepts and ideas to children. A play could also trigger the tender, but creative mind of children to explore new frontiers to learn This paper provides clues and explains how drama can be an instrument for learning.

PLAY can occupy the most important place during childhood. Play is the highest expression of human development in child, for it alone is the free expression of what is in the child's mind and soul. It is the purest product of the child, and at the same time, it is a type and copy of human life at all stages in all relations

Psychologists have viewed play as a way of working through unconscious pressures, some have discerned a close relationship between play and the creative process, signifying that art is actually one aspect of play. Regardless of theory, however, there is consensus on play as being a profoundly important activity in the process of human development. According to Richard Courtney, whose scholarly work on the subject encompasses all areas, "play initially and art subsequently develop imaginative constructions, whereby people function in the world. The arts are expressions of imagination through which the personality develops and upon which cognitive and abstract ways of working with the environment are built"

The child plays almost as soon as s/he moves, and through playing s/he learns In his dramatic play three or four year old tries on the role of those around him, s/he observes this activity and learns by pretending to be doing S/he enters the various worlds of his family and neighbourhood, interpreting and reenacting, first by observing, then responding, repeating in play what has made a strong impression on her/him. By the time the child is ready for school

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*Senior Lecturer, Bhagini Nivedita College, Delhi University, Delhi

s/he has learned much about the world s/he lives in

Dramatic play forms an essential part of children's free play, and can be widely observed in children. It is variously described as fantasy play, imaginative play, role-play, free play and spontaneous drama.

Creative Drama

The term creative drama as accepted by the children's theatre association of America in 1997 is. "Creative drama is an improvisational, nonexhibitional, process-centred form of drama in which participants are guided by a leader, to imagine, enact, and reflect upon human experiences".

The four basic requirements for the art of creative dramatics include a group of children, a qualified leader or teacher, a space enough for children to move about and an idea from which to create.

Growth remains a miracle and mystery. We cannot see growth but see the results of growth. It is believed that a child grows into a whole personality by having his developmental needs satisfied These basic growth needs are physical, cognitive, language, social and emotional. Drama helps in the development of the child at various stages. The following section elaborates on the relationship between drama and child development.

Physical Development

Drama involves the whole person, not only the mind, but the entire body and all its parts Drama is not merely an art form but a tool for child development. Body movements, mime, rhythm and gestures form its basic components. Drama can therefore play an important role in the physical development, using and building on existing levels and refining them further.

As children move during the primary school years they gain control over their bodies and can sit and stand for longer periods of time. However, they can become more fatigued by longer periods of sitting than by running, jumping or bicycling. Physical action is essential for children to refine their developing skills. An important principle here is that they should be engaged in active, rather than passive activities

Drama is one such active engagement for the child where he gets an opportunity to hone not only his physical abilities but also his mental faculties Body movement is an integral part of creative drama by which the child gets aware of his various body parts and also develops flexibility in them through various physical activities.

The physical development of the child takes place according to a predictable pattern governed by the two laws of the directional sequence of development.

1. The Proximodistal Law — the body develops from the center to the periphery. The child begins to move the central parts of the body before gaining control of the extremities
2. The Cephalocaudal Law — Development takes place from head to toe. The child is first able to control the head, then the torso and finally the legs.

A similar pattern of development is reflected in drama activities. The progression of activities here is from body movements to mime, that is from using the entire body to using specific parts of the body that too with accuracy. Rhythmic exercises may initially involve the entire body but gradually use the peripheral parts of the body, the hands and feet Children soon learn the ability to communicate with the use of body. They are able to enact and express using their body in creative ways by being different characters.

Social Development

An extensive amount of peer interaction during childhood involves play, however, social play is but one type. Play as described earlier is a pleasurable activity engaged in for its own sake Mildred Parten's classic study of play, the types of play, and the sociocultural contexts of play lends clarity in this area The following categories of play have emerged from Parten's study of the concept:

1. *Unoccupied play* occurs when the child is not engaging in play as it is commonly understood and may stand in one spot, look around the room, or perform random movements that do not seem to have a goal.
2. *Solitary play* occurs when the child plays alone Two and three year olds engage more in solitary play.
3. *Onlooker play* occurs when the child watches other children play
4. *Parallel play* occurs when the child plays separately from others, but with toys liks those the others are using or in a manner that mimics their play.
5. *Associate play* occurs when play involves social interaction with little or no organization
6. *Cooperative play* involves social interaction in a group with a sense of group identity and organized activity

Drama is considered a kind of cooperative play where children together are involved in a new creation, be it building a story or improvising a play However, the contemporary researchers emphasize the cognitive and social aspects of play. Among these is social play that involves social interaction with peers *Constructive play* occurs when children engage in self-regulated creation or construction of a product or a problem solution. Constructive play can also be used to foster academic skills learning, thinking skills, and problem solving. Educators often support the performance of plays, the writing of imaginary stories, and the expression of artistic abilities. Through dramatic play, the child is socialized to the rules and norms of socielty The child is able to acquire positive social values like cooperation, helpfulness, initiative, team work and discipline.

Cognitive Development

Jean Piaget's theories for cognitive development of children give three principles that can be applied to children's education First, the foremost issue in education is communication. In s/he has learned much about the world s/he lives in

Dramatic play forms an essential part of children's free play, and can be widely observed in children. It is variously described as fantasy play, imaginative play, role-play, free play and spontaneous drama

Creative Drama

The term creative drama as accepted by the children's theatre association of America in 1997 is: "Creative drama is an improvisational, nonexhibitional, process-centred form of drama in which participants are guided by a leader, to imagine, enact, and reflect upon human experiences"

The four basic requirements for the art of creative dramatics include a group of children, a qualified leader or teacher, a space enough for children to move about and an idea from which to create.

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Piaget's theory, a child's mind is not a blank slate; to the contray, the child has a host of ideas about the physical and natural world, but these ideas differ from that of adults Adults must learn to comprehend what children are saying and to respond in the same mode of discourse that children use Second, the child is alwlays unlearning and relearning in addition to acquiring knowledge. Children come to school with their own ideas about space, time, causality, quantity, and number. Third, the child is a knowing creature, motivated to acquire knowledge. The best way to nurture this motivation is to allow the child to interact spontaneously with the environment, education needs to ensure that it does not dull the child's eagerness to know by providing an overly rigid curriculum that disrupts the child's rhythem and pace of learning.

It is through dramatic play that the child learns about the world around him, about people, events and objects, by becoming or symbolically creating objects These repeated experiences enable him to explore, develop, test out and refine concepts as his intelligence acts upon these experiences

Peter Slade, a theorist on Child drama, has drawn a useful distinction between – Projected Play and Personal Play. In personal play, the whole person or self is used. It is typified by movement and charactrerization. The child uses his entire body and mind, the whole 'self', to become something and do something. In projected play, the whole mind is used, but the body not so fully The child stands still, sits, lies prone, or squats, and may use chiefly the hands. The main action takes place outside the body, and the whole is characterized by extreme mental absorption In this the objects outside the body are manipulated and thoughts projected on them.

Language Development

Language performs several functions, each related to some aspect of human development. These are:

1. Instrumental – directing or causing action or responding to direction.
2. Expressive – expressing emotions.
3. Maintaining social relationships.
4. Other cognitive functions – reporting or acquiring information, reflecting, interpreting, exploring, clarifying and evaluating

In the early stages the child uses language for instrumental and expressive purposes, and only later acquires command over the other uses The development of language is related to the availability of opportunities for various types of use. Drama with its variety of experiences provides an important medium for the growth of symbolization and skill in the use of language. Refinement of concepts also takes place constantly through language. The relationship between thought and language is a complex one and different theories accord primacy to one rather than to the other. But a foundation of rich experience and opportunities to verbalize in various ways is essential in either case.

Children get opportunities to listen to various sounds and voices around them and then to verbalize the same. Gradually they begin to associate sounds and words, use dialogues during improvisations The dramatic process helps build control on language in children and also enhance clarity in speech. As each child gets an opportunity to speak up, in the process even the shy child participates and develops interaction with his peers and becomes confident The flow of language grows on through drama.

Emotional Development

Every child has feelings. A child needs to know that all feelings are natural, but s/he needs to learn to channel the feelings in ways that are acceptable to herself/ himself and others. She/He needs to work off his feelings in constructive ways rather than having them hushed up inside his for surging self. She/He needs to learn that she/he will not be allowed to huret herself/ himself or others when she/he has these strong feelings. She/He needs help in learning how to release and control feelings.

Drama deals with emotion. The real purpose of emotion is to guide and inspire right conduct. Drama's purpose is to stir and release emotions in a healthy way. In creative dramatics children's emotions are exercised when they become both good and evil characters. In their playing they often experience lowness and loftiness in exciting story conflicts. In so doing they release emotions in a healthy way.

Play is a medium through which the child can experience his wishes, fears and frustrations, and act them out in fantasy. A child who is unable to get something in reality is free to fantacise his feelings and feels satisfied and content through the enactment. Children act out not only their secret wishes, but also their fears and frustrations. By playing out his unwanted emotions in the safe and secure world of make-believe, the child obtains relief from powerful emotions which may trouble him deeply otherwise.

Dramatic play contributes to the emotional development of the child in yet another sense Through role play, the child 'learns about' different roles at the intellectual level, by observing minutely the external characteristics of the role and imitating them, thus adding to his store of knowledge and concepts. He also feels the inner meaning of each role by acting it out and finding out what it feels to be that person. Thus a child playing a father, a teacher, a policeman learns about the role from observation and also feels each person from within Thus s/he can empathise with different characters during drama and also in real life.

Children go to school to grow and to learn so they may live happily as citizens in a democratic socity. We have considered specific ways in which creative dramatics contributes to child growth and development. We have recognized ways in which John Dewey's accepted principle of learning by doing is put into action We have seen William Kilpatrick's theory functioning and emphasizing that an individual learns what s/he lives and to the extent that s/he lives an experience Experiences that are creative, exciting, vital, and dramatic contribute to permanent learning Dramatic experiences based on literature and life are wide in scope and provide a viariety of opportunities for children to get close to realities that cannot possibly be reached firsthand.

Message of the Teacher

The "message" of the teacher to the students is not merely to *impart* knowledge contents of books, which *is* largely information fast getting out of date But more than that it should be *inspiration*, by *his/ her* example, towards the process of *character building* and the use of knowledge for welfare of the community *The total message to the students and to the community is the total life of the teacher*

D.S. Kothari

Education and Building of Character, 1988

Determinants of Socio Emotional Development in Pre-school

CHANDRA K. SINGH*
SUDHA CHHIKARA*

Pre-school education is one of the factors which helps in realising the goal of education for all (EFA) as it lays ground for children to reach the primary school. This study has explored into the determinants of socio emotional development in pre-school Attention needs to be paid to improve learning conditions to retain children in school and grow well, concludes the study

Introduction

Young Children have much to learn about themselves and surrounding environment. During this period they have effect on others and they are being affected by significant others in their lives as they learn more during early years Particularly from parents, teacher and peers. It becomes vitally important in their later ability to form and maintain relationship, work and play well with others and feel valued confident and competent in different situations. The socio emotional domains encompasses four essential aspects of children development, education and social skills, emotional strength and stability. The most effective paradigm for integrating body of knowledge and skills is through childrens' personal experiences at home, school and in the community in which they live

The development of socio emotional strength is a life long task and it is interdependent with children's cognitive physical and social development. Children spend major amount in extra familial settings. This study was conducted to find out the socio-emotional development in pre-school

Methodology

Study was conducted in purposively selected state of Haryana and union

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* Department of Human Development and Family Studies, College of Home Science, CCS Haryana Agricultural University, Hisar-125 004, Haryana

territory of Chandigarh Multistage sampling technique was used. Pre primary and primary sections were selected purposively from rural urban and semi-urban areas of Hisar district and Chandigarh Two Pre-school laboratories were taken from the Department of HDFS, CCS HAU, Hisar and other lab. Nursery schools from Government Girls College, Chandigarh run by the Department of Child Development were also selected purposively Further seven schools from each cultural settings i.e. rural, semi-urban areas were selected randomly from both places-Hisar and Chandigarh. Sample from urban areas consisted of fourteen schools each from both cities, seven from private and equal number from public sector were taken randomly. To gather information principal and school teachers were interviewed to know about socio emotional domains. Data were collected through interview schedule and observation check-list. Descriptive analysis was used to draw inferences

Results and Discussion

Socio emotional domain deals with the facilities and opportunities provided for promoting socio-emotional development in children.

Area-wise comparison showed (Table 1) that group participation/interaction activities were conducted in all the schools of urban (private) 78.57 per private urban government, 35.71 per cent semi urban, 64 28 per cent rural area Both the preschool labs reported to have conducted activities to enhance group participation

Further comparison also indicated that 78.57 per cent urban private, 57 14 per cent urban government, 42.85 per cent semi urban and 42 85 per cent rural schools were providing schedule for development of pro-social behavior pattern. Both preschool laboratories also reported that the activities were conducted to develop pro-social behaviour pattern in children (Table 1).

According to Rae Pice (1997), movement of education can help a child to adjust socially and emotionally because it can provide him with successful experiences and permit inter-relationship with other children in groups with a partner. He shares space, he has to take turns and cooperate. He thus develops social awareness and achieves satisfaction through peer relationship and through play.

In case of the aspects inculcating social responsibilities in children, Table 1 suggests that in various cultural settings also children were being given responsibility to develop social responsibilities. Data showed that about 78.57 per cent rural, 64.28 per cent urban government and urban private and 42.85 per cent semi-urban schools were involved in inculcating social responsibilities to children. Both preschool laboratories also inculcate social responsibilities in children.

It was observed that children were not given an opportunity that encouraged sharing, caring, cooperation and sympathetic attitude among them. There was also very little non-formal interaction between teacher and children because most of the time teachers were busy in planning home work/class work for children. During this time if children try to talk or play among themselves they are punished. Most common punishments were either head down or putting finger on mouth to keep silence. However in few schools of urban private setting, urban govt school of chandigarh and preschool lab, it was observed that a pro-social behaviour patterns were encouraged through some activities or games.

Observations also suggest that except in rural schools and pre-school labs, the children were not given any social responsibilities In these schools children were asked to pack up play materials, putting food container and water bottles at proper places. In some of the rural and urban private schools children were also asked to put the chairs and tables for the teachers and distributing the note books to fellow children, conveying message to other teachers, etc. In few urban private and government schools the children were assigned some of the social responsibilities such as guiding and helping the youger children to toilets and water fountain/cooler.

Socio-emotional learning centers also include the housekeeping area/doll house where children can play different roles. They could learn certain social skills such as sharing, taking responsibilities, and expressing emotions with each other through pretend play.

It was also found that 57.14 per cent urban private 28 57 per cent rural , 21.42 per cent urban government and only 7.14 per cent peri-urban schools had this type of facility. Both preschool laboratories also had separate place/ corner for doll play or house keeping with accessories.

Observations made by the investigator suggested that information reported by the school were not authentic because there was no separate place or corner for house keeping in most of the school except preschool labs and only few urban private schools. Preschool labs run by the department of Human Development and Family Studies (HDFS), Hisar had very good facilities and very attractive house keeping material in separate doll corner Doll corner also had different dresses and accessories for role modeling.

The facility for puppert play was not available in many schools as the table reveals that 42.85 per cent urban government, 21.42 per cent of urban private, 7.14 per cent peri urban and rural schools were having the facility for puppet play whereas only one preschool lab reported to have puppet play facility.

Table 1 depicted that schools were actively involved in celebrating national day, some festival, birthday, sports day, etc., at both the places i.e., Hisar and Chandigarh Same sequence was followed when comparison was made among various cultural settings, in urban area most of the schools used to celebrate festivals, birthday and national day. None of the schools in rural setting and only few in semi-urban setting were celebrating birthday Both preschool labs reported that all the occasions were celebrated in the schools.

The observations suggest that

festivals were celebrated in almost all schools in urban settings but celebration of national festivals were given less importance. It was also observed that in rural setting no importance was given to the celebration of festivals, birthday and national days. Preschool labs gave importance to the celebrations of children's birthday as it gives an understanding in the concept of their own growth year by year and also the concept of numbers. Such celebrations also promoted social development in children as children encounter mathematical ideas long before they attend school. For example young children learn that money has value when adults take them along shopping, and they learn that birthdays occur at a particular time of the year

Distribution over different cultural setting regarding development of independence in children revealed that 85.71 per cent semi-urban, 78 57 per cent urban government and rural and 64 28 per cent urban private were reported that they develop independence in children. Both the preschool labs also provided the facilities for development of independence in children.

According to NAEYC (1988), staff should encourage developmentally appropriate independence in children in routine activities such as picking up toys, personal grooming (use of toilet, cleaning of hands), caring for school materials and other self-help skills Independence develops gradually through opportunities for successful practice. Expectations of independent functioning in children vary with the developmental level of the child.

Observations made by the researchers suggested that in some of the schools children were encouraged to help in packing up of material when an activity was over such as putting materials back at appropriate places, distributing materials among children, putting off their shoes etc. Independence is also encouraged by asking children to go to toilet alone, bring water and things for other younger children and sometimes for teachers and making them learn to select play material on their own.

A provision to keep pets at pre-schools was also explored however only one preschool in urban private setting of Hisar was observed to keeping a pet (rabbit) Such a provision encouraged an understanding among children about the need of animals but almost all the schools including preschool labs were not putting any emphasis on this aspect of socio-emotional domain There should be provision for keeping pets and aquarium in school for children in order to make them learn about pet animals and to take care of pets.

It was found that 50 per urban private, 35.71 per cent urban government, 14.28 per cent semi-urban and none of the rural schools reported to have the above provision for children. As far as pre-school labs were concerned in this matter, it was noticed that both the preschool labs were conducting these activities.

Table 1 shows that all schools in urban and rural areas including pre school labs were taking up practices for the development of social values in children whereas only 85.71 per cent of semi-urban schools were following such a practice in children

The observation made by the researchers reveals that social values like greeting at arrival and departure were not observed by children these were also not being initiated either by teachers or by parents except in some urban private schools and preschool labs

In obeying the instructions of the teachers by children, it was observed that in some of the schools the strength of the children was very high and a single teacher was not able to control them. So there was no question of following the instructions by children. It was also very interesting to observe that teachers were least bothered about the children's activities and children were found quarrelling while teacher was busy in checking homework On the other hand, in some of the schools, it was observed that social values seem to be inculcated in children, which were reflected in their behaviour and activities. The teachers were also least interested and bothered about promoting social skills in children but more interested in completing the syllabus in time They did not have knowledge regarding this domain. Hence, training for teachers should be organized in the field of early childhood education.

Conclusion

Although every one agrees that good socio emotional health is necessary for effective functioning and a good quality of life. To achieve this goal educationist and professionals should be actively involved in guiding the development of

TABLE 1
Areawise Existing Status of Educational Programme for Young Children Regarding Socio Emotional Domain

Sl No	*Aspect*	*Urban Govt N=14*	*Urban Private N=14*	*Semi Urban N=14*	*Rural N=14*	*Pre-school Lab N=2*
1	Social group participation	11 (78 57)	14 (100)	5 (35.71)	9 (64 28)	2 (100)
2	Development of prosocial behaviour pattern	8 (57 14)	11 (78 57)	6 (42 85)	6 (42 85)	2 (100)
3	Separate place for doll play/house keeping with accessories	3 (21.42)	8 (57.14)	1 (7 14)	4 (28.57)	2 (100)
4.	Facility to puppet play	6 (42.85)	3 (21 42)	1 (7 14)	1 (7.14)	1 (50)
5.	Observe celebration of					
	a. Festivals	11 (78.57)	14 (100)	5 (35 71)	5 (35 71)	2 (100)

	b Birthday	8 (57 14)	13 (92 85)	2 (21 28)	– (100)	2
	c National days	5 (35 71)	11 (78 57)	3 (21 42)	7 (50 00)	2 (100)
	d Any other (* Sports day)	2 (14 28)	11 (78 57)	5 (35.71)	–	2 (100)
7	Development of independence	11 (78.57)	9 (64 28)	12 (85 71)	11 (78 57)	2 (100)
8	Provision for keeping pets	–	1	–	– (7 14)	–
9.	Organises nature walks excursions	5 (35 71)	7 (50)	2 (14 28)	–	2 (100)
10	Development of social values	14 (100)	14 (100)	12 (85 71)	14 (100)	2 (100)

Figures in parenthesis indicate percentage

the young children. Early years are formative years. So, young children should get positive learning climates to encourage positive socio-emotional development and good overall personality.

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Education of Single Parent Cared Child : Problems and Remedial Measures

PRADIPTA KUMAR PATTNAIK*
MANAS RANJAN PANIGRAHI**

This article discusses problems of children with single parents It gives clues for parents and teachers to deal with problems faced by such children and help them adjust and learn in school

Introduction

Every child is dependent on parents and finds herself/himself face to face with a world that gives and takes, that expects adoption and satisfies life. Her/his instincts are baffled in their fulfilment by obstances whose conquest gives in pain. S/he realises at an early age that there are other human beings who are able to satisfy their urges more completely and are better prepared to live Adults have a major responsibility in forstering children's play (Berger, 1999; Murato and Maeda, 2002, Surick, in press). Parents should provide stimulation attitude and insight that support the development of each child's potential, with the youngest of children, the adult is totally responsible for providing materials and playing with the child as child's attention spans increase. During this time family bonds play very important role in the development of child Particularly both mother and father have to be true nurses and teachers Home where the parents exhibit a centre of love and affection is the best place for education and first school of the child. It has been observed that many children are deprived of their mother's nourishment and father's care Without these two the children are likely to suffer a lot.

In general sense, a child having either father or mother is known as single parent child If one of the parents is temporarily or permanently absent,

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* Junior Project Fellow, Department of Teacher Education and Extension, NCERT, New Delhi 110016

** *Research Associate*, Department of Elementary Education, NCERT, New Delhi 110016

because of

- Compulsion of business
- Employment or Job
- Separation or Divorce
- Death of mother or father.

These children invariably would face or confront many problems Due to single parent, the child may lack parental control or may face repression or over control The child becomes deprived of the influence of one of the parents, either mother or father and this may result in mutifarious problems or complexity like delinquency, maladjustment, regression or psycho/social aggressiveness. Sometimes, if the child is not properly handled, may create neurosis and psychosis.

Problems of Single Parent Cared Child

Children's assumption of broken home

Child's is just soft being and the mental condition of child is very soft, anything may disorder the psychgological process, when there is conflict between mother and father in home condition that directly affects the child's mental health and that creates a fear in the child. This type of fearness makes the child to assume about the future condition of homely atmosphere

Behavioural Problem

As said earlier, home is the first school of child, through which s/he learns how to cope with the present environment If the home is not good, it is very difficult for the child to cope with his surroundings like friends, teachers, elders, neighbours and own gangs.

Social Problems

Society is another important place of the child in which child learns social norms and sociable activity. Parents are the first motivators for the child to make him/her sociable in the surroundings. By this the social instincts are developed. But by the single parent or without parents this type of social adjustment is not properly developed

Educational Problems

Parents are the first and prime motivators of the child towards education They create interest in the child for schooling. Without parental involvement it is very difficult for the child to get education from the school When parents are outside most of the time or they may not give sufficient time to their child, the interest of schooling may decrease and instead of devoting time towards study, they spend more time for other activities like excess playing, mixing with bad friends and laziness.

Cultural Problem

These children with single parent, may not get sufficient time from the parent for celebrating festival, customs, and tradition in home condition/outside Then this may also cause the child's frustration. When the child sees others' family celebrating functions with the home atmosphere the child may feel frustrated and also it may lead to irritated behaviour towards the family

Problems of health and nutrition

In the very early stage child needs proper care of the parents for physical development Due to the lack of time parents are not able to give proper food and medical facility They are not interested in the physical condition of the child by which different nutrition problems may arise in the child. Proper development (emotional and physical) of the child may be delayed

Due to the above mentioned problems the child may suffer academically, emotionally and socially It would be better for the single parent to take precautions and foster the child creating a conducive atmosphere.

Remedial Measures for Single Parent Cared Child

Personal Counselling

Parents should make such a situation in the family that all children need to feel that they belong to the family group. They need faith as well as food and a close relationship with the parents. There should be personal counselling to parents how to take care and whenever they get time they should fully devote their valuable time for the child If they have no time, they should manage a good childcare centre for their child. For food and nutrition they should consult with doctors and child counellors. Parents should consult the personal counselling centre for their child.

Counselling for Children

Parents should consult a child counsellor for the child Counsellors give some tips about child's gangs, elders, teachers and his surroundings Counsellors also counsel the child about his/her health, food, and adjustment with the peer groups and social development By this counselling the child may not feel lonely.

Provision of short stay norms for women

Mothers who are always out of their home/family should give maximum time possible when they are free at home If the child is very small, she may take the help of childcare centre. In the short stay at home the mother should check the child's behaviour towards others/herself

In case of separation attempt should made to bring them together

If the parents are separated they should be very careful themselves The separation effect should not affect the child They should manage themselves to get together as soon as possible by which child's development perfectly improves

In case of job compulsion, they should try to seek job at the same place They should try to choose the nearest place from their home. By this they get sufficient time to mix with their child and they will give their affection In case of death of either the other person should try to marry with a person who can love the child like his/her own child

Proper training to teachers for providing better early childhood care education would serve the purpose of helping the children. The most important guidance takes place through teachers friendly and understanding relation with each child. This teacher pupil relation has its roots in a genuine, deep psychological acceptance of each child – a belief is that each child is valuable By this relationship the child may not feel lonely and absence of father and mother

Teachers must be aware of each child's needs and know when and how to match material and activities with the child's interest. Teacher also must be observant of children in spontaneous play setting, and invervene at critical time (Isenberg & Jalong, 2000, Johnson et al, 1999).

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Education with Purpose : Tips for Parents and Teachers

K K. GUPTA[*]

Many educationists make it clear that education is not just learning the three Rs or just acquisition of knowledge. This paper also regrets that today education has become only cramming of information. The 'tips' for parents and teachers would help to make children to be educated in the true sense

Education throughout has been subjected to change. What it was in distant past is not necessarily education today With the change in time there has been change in the field of education too. Education today mainly aims at the acquisition of knowledge The three Rs, i.e Reading, Writing and Arithmetic, according to Mahatma Gandhi, have become the sole objects of education. The three Hs i e Head, Hand and Heart are losing importance Consequently development of Hand and Heart is neither the concern of students nor the concern of parents today It is largely because of the fact that students are made to come up to the expectations of parents and teachers in terms of the acquisitions of knowledge alone.

Parents today are running a rat race because of the cut-throat competition in the society and their aspirations and apprehensions are eating into the happy and healthy growth of children Parents wish their children to grow in their full form, they should keep the following tips in their minds

1 To be patient with the child's performance
2. To pay a patient hearing to the child and try to be all sympathetic.
3. To create a situation where a child is inspired to work honestly and sincerely
4. To keep on encouraging the child for acquiring the high things of life

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[*] *Head (Retd.), Academic Cell* , Atomic Energy Education Society, Mumbai.

5. To root out any kind of fear from the mind of the child

6. To create a feeling of confidence in the child

7. To develop a scope for heart to heart dialogue with the child.

8. To create congenial atmosphere in the family.

9. To avoid imposing anything on the child which is not suited to his taste and liking

If parents remain particular about the aforesaid tips, their children will definitely grow to be useful citizens of the country.

Since parents are genuinely interested in the welfare of their children, it is for the children to rise above the petty things of life prevailing in the school and the society The well-known proverb "You can take a horse to the river but you can't make it drink" holds true in the case of students. Parents can send their wards to a good school and teachers can give their best in the classrooms but these two agencies can be utter failures if students are not willing and interested in being active participants Their active participation alone can make the difference and enable them to attain whatever they aspire and perspire for

On the basis of whatever has transpired from the educationists who have contributed to the field of education, it will be always in the interest of students if they bear in mind the following tips.

1. They should abide by the instructions given by the learned teachers.

2. They should avoid missing their classes

3. They should restrict themselves to educational activities

4. They should avoid indulging in indisciplined or undesirable activities

5. They should come to the temple of learning, i.e. school with a motto to learn something worthwhile.

6. They should form a study circle comprising of students of similar taste.

7. They should take active part in co-curricular activities

8. They should believe in "Early to bed and early to rise, makes a man healthy, wealthy and wise"

9. They should believe in formation of good habits.

As we all know that the job of teachers is supposed to be more missionary and less mercenary, it becomes necessary for teachers to be deeply dedicated and devoted to the cause of education. In the spread of real education, teachers have decidedly a definite and prominent role to play Teachers, wishing to play effective role in the shaping of the future careers of students, are required to keep the below given suggestions in mind

1. Keep themselves equipped with the latest techniques of teaching learning process.

2. Keep on encouraging students in the light of their ability, attitude and aptitude

3 Be the real friend, guide and well wisher of students

4 Create a lively situation in the class.

5. Spot out the hidden talents of students and advise them accordingly

6. Avoid humiliating slow learners

7. Create a feeling of belongingness in students

8. Create an atmosphere where every student feels tempted to improve upon

9. Remain in touch with parents whenever required.

To sum up, if the aforesaid agencies i.e Parents, Students and Teachers are there to play their roles effectively, the schools will definitely have a constructive role to play in shaping the destiny of the future citizens of the country in particular and the country in general.

Deeducating children to grow in full

Today, whatever is taught in schools, colleges and universities, comes under education and is accepted as education but in the words of Emerson it is simply "the means of education" Had acquisition of the dry bones of knowledge, scoring of hundred out of hundred by rote memory, attainment of degrees with distinction and acquiring of status in terms of post and position, much to do with education, great persons of the world like Tagore, Surdas, Valmiki, Shakespeare, Thomas Alva Edison, Forebel and others would not have come to lime light. Their constructive contribution to the field of art, literature, music, electricity and education will ever remain green in the minds of one and all

Forebel, the seventh child of his parents, who could not read due to poverty and family problems, rose to be the father of Kinder Garten Method. Edison, who was withdrawn from the school, contributed electricity to the world. Shakespeare, who could read upto class IX, rose to prominence for his invaluable contributions to English literature. Valmiki, who could not even utter 'Ram' properly, i e. started with "MARA" became the writer of RAMAYANA – the great epic It is said Surdas, blind by birth, gave to the world what even man with fully sighlect eyes could not do Tagore a versatile genius, contributed to the field of art, music, poetry and education particularly when he always tried to remain away from his classes i c. he always preferred to be in the lovely lap of nature. For him "auto-education" was real education.

Dramas by Shakespeare surpassed the height of the three University Wits i.e. Kyd, LyLy and Marlowe Critics, all out to wreck the reputation of Shakespeare, went to the extent of calling him "as an upstart crow beautified with the feathers of university wits". But because of communicability and universality contained in his masterpieces, he is immortal

Vidyottama, an erudite and established scholar known all over the world for cutting the same branch on which he was sitting, in later sate, became the writer of Meghdoot, Abhigyanshakuntalam and Kumarshambhavam Even Ramanujan, who could not clear intermediate examination was recognised as a genius for his rare and invaluable contribution to the field of Mathematics. Not only Hardy, the famous English mathematician but the entire world could know his real worth It is really difficult to catalogue all such people who without being tutored could give a lot to the world

Why go to the past or distant past for such examples alone? Even in the living present where are examples of people reaching the height without being coached either in private or in schools, colleges and universities Mostly children today acquire more than their age, perspire for more than what they are meant, talk which our fore-fathers would not have even imagined, conceived and comprehended and at times some of the children behave in such an elderly manner that even octogenarians feel small before them A child of standard I one day complains to the Madam "X Loves Y and Y also loves X" The teacher in all good faith explains the value of love in life by citing examples. "A brother loves his sister", "A sister loves her brother", "A father loves his son or daughter", "A mother loves her son or daugher" etc. Quick was the reply, no madam - not this of love - rather "Mummy Papa wala Pyar"

Such is the example of "knowledge explosion" Such is the example of the exposure of our children The aforesaid example is enough to prove the type of maturity our children have achieved at such a tender age. Children who are known for their "imitating propensity" keep themselves so much tuned to the T.V serials that they start copying instead of playing their own roles Parents also have no option left but to yield to what is being done in the name of advancement. Not only this, such parents are also out to compel their children to acquire degrees at any cost Expectations of parents from children, in their competitive age, reign supreme. They are least worried about age, ability and aptitude. Consequently things are going off the rails Mental, physical and social disorders can be perceived anywhere in the children of any age group Maturity level of children is mounting so high that if steps are not taken in time to monitor and channelise the expectations and aspirations of parents, performance of children in the light of age, aptitude and ability and behaviour of the society in terms of recognition, days are not far off when the number of mental hospitals will exceed the number of schools in the country

It is in the light of the above that instead of educating them, it is better if we start de-educating them, failing which things are going to be still worse. It is high time that we all tag our brains together and create a situation where our children grow in full.

In other words physical, intellectual, spiritual, mental and aesthetic developments go side by side, otherwise our children under the compulsion of parents will keep on aspiring and perspiring to acquire in a day what our forefathers acquired in years.

Internet Tools for Increasing Students' English Language Skills

P. Sasikala*
R. Ravichandran**

Use of information and communication technologies in education serves as a better tool for increasing the learning experiences of children in classroom Effective and efficient use of Internet sites for learning would be a booster to learning This paper provides information about some useful websites for reading and other language skills in English.

The Internet seems to be all about reading. Are there really any tools out there to help our children read better? Yes there are. The following are Internet tools that can help our students to improve their reading skills, often with a lot of fun along the way.

Printable ABC Pages and Letter Worksheets

Class Brain has created a set of printable ABC colouring pages (http://www.classbrain com/cb_pk/cb_pkptclabc.htm) and we've located some wonderful ABC colouring Collections (http://www.classbrain.com/cb_pk/cb_pkptcl.htm) elsewhere on the Internet. Simply pick your favorites, print them out, and have fun colouring with the children.

One of the first steps_to reading is recognizing letter forms Use the language worksheets (http.//www classbrain.com/artteach/publish/article_46.shtml) to help students identify the correct letter.

Book Finders

The Book Adventure Foundation has a wonderful programme that recommends

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* Makhanlal Chaturvedi National University, 222, Zone-I, M.P. Nagar, Bhopal-462 011
** Regional Institute of Education (NCERT), Shyamla Hills, Bhopal-462 013

books based on four simple questions The Book Finder's recommendations are based on the child's grade level, whether the book should be at grade level (or above or below it), whether the book is fiction or nonfiction; and the types of books they like to read After filling in these items, the child gets a list of suggested books If your students register, they can take quizzes on the books they read to check their comprehension This is currently a free resource (http.//www.bookadventure org/ki/bs/ki_bs_helpfind.asp)

The California Reading List (http / www.cde ca gov/statetests/star/ readinglist html) has developed a book finder to assist parents and students in selecting books that correspond with a child's ability to read

Online Interactive Stories

Our favorite choice for interactive stories is BBC's The Little Animals Activity Centre. (http://www.bbc co.uk/ education/laac/) Their new Story Bear section has stories that can be read or listened to online which are fully interactive There's lots of fun in the simple stories and activities along the way.

Mighty Book (http.//www. mightybook com/home.htm) has stories that children can read online. The site is broken down by age· 2-4, 4-6, 6-8, 8-10, and pre-teen For the most part, the site seems most apropriate for young readers Each of the stories is illustrated and has attached audio. Students then can read along while the story is being read to them. This is a wonderful site for young readers

Between the Lions (http:// pbskids org/lions/) is a PBS site for children who are learning to read There are numerous online stories for them to explore The stories are not paced stories like the ones at Mighty Books and audio is not attached This makes a good step-up reading site for children who enjoy reading stories online and want to do it "on thir own".

Literacy Games

Building Language for Literacy (http.// teacher scholastic com/activities/bll/ index.htm) is a section created by Scholastic that lets young children work on their reading skills Pre-readers will enjoy matching items. Leo introduces individual letters and Reggie lets children play a simple game with rhyming words.

The BBC section for Literacy (http / /www bbc co.uk/schools/4-11/ subjectsi_l.shtml) This setion has games for children that help them with phonics, parts of speeck, and other reading issues. The games are created in Flash, so there is smooth animation and fun interactions. The Little Animals Activity Centre (http.//www.bbc.co uk/ education/laac/) has wonderful phonics-based games for children. Characters, like Digby Mole, help chidren understand word endings, first sounds and rhyming sounds. This is a fun way for children to get a first introduction to letters and the sounds they make.

Alien Scavenger Hunt (http / www.cogcon.com/gamegoo/games/ alien/ash html) from Game Goo lets children "capture" the letters that spell short words As each word is captured, it's shown at the top of the screen in its proper place in the word When all of the letters are caught the announcer says each letter and then the word they create The words change each time the child plays the game. This is a fun game for early readers.

Story Based Lessons

Takako's Great Adventure (http·/international ouc.bc.ca/takako/index html) is a nicely written story adventure that has vocabulary quizzes and questions built into it. The story is read out loud by a narrator and key vocabulary is highlighted with glossary links built in after listening to each of the story's episodes. The student can take quizzes or do crossword puzzles and other drills to work on their vocabulary and comprehension. This is a good exercise for listening skills.

Grammar, Vocabulary and Writing

Our favorite grammar site is the Guide to Grammar and Writing (http.//cetc2 commnet edu/grammar/). This site is an amazing resource! Wondering what a preposition is? You'll find everything you have ever wanted to know about them This English language site is one of the gems of the Internet.

The Grammar Handbook (http·//www.english.uiuc.edu/cws/wworkshop/index html) at the Writers' Workshop, University of Illinois is a clear and helpful guide for students, parents, and teachers. Well-presented examples help take the mystery out of certain parts of speech in the English language.

If you're looking for some good vocabulary and grammar quizzes for your students or yourself, activities for ESL Students has a wonderful selection. Our favorites are under the Flash Quizzes for English Study (http/a4esl.org/q/f/) These are great quizzes for anyone interested in improving their language skills.

Writing-Step-By-Step

(http·//www.ipl.org/div/aplus/stepfirst.htm)

When it's time for a teen that you know to write a full paper, send them to this step-by-step guide As they work their way though the steps, the terror of doing a major paper should start to subside

Reading Tools

AceReader Pro (http·//www.stepware.com/classbrain) is a wonderful little programme that you can download to help increase your reading speed. There are preset drill and reading comprehension tests built into the program. Our favorite part of the progamme is its ability to pace you on your own files All you have to do is import them into the Expert Mode and set your preferences. This programme is not free, but if you're trying to increase your speed of reading this will help.

TypeIt4Me (http://www.typeit4me com/) is a very helpful little tool for students. This little programme works cross platform in any of your programmes that handle text, such as Word. It allows you to create shortcuts for long words or phrases that you repeat on a regular basis. Although Microsoft word allows you to programme shortcuts, it can be confusing if there are words or phrases that are close. *TypeIt4Me* allows you to select them from a pull-down menu It is a great way to assist children who have learning disabilities such as dyslexia or dysgraphia, or mobility problems due to conditions such as cerebral palsy. Instead of struggling with certain words, the student could insert it through this program. *TypeIT4Me* is a helpful writing aid that may make it easier for these students to communicate

Parents and Teachers with Special Needs Students

If you have a child with a learning disability, you may request the school to modify classroom participation to accommodate the special needs of certain children. Many times this can be accomplished in an informal fashion with the student's teacher, but if you need it, this is a great way to make sure that your student doesn't get left behind.

Your plan may include something as simple as moving the student to the front of the class to limit distractions or as complicated as complete plans for a redesigned curriculum with adjusted assessment standards The following links will take you to some very helpful information on this topic. The individual Education Plan (IEP) (http // www.usu.edu/teachall/iep htm) from the University of Utah. IEP Documentation Tools for Planning and Delivering (http://www usu edu/ teachall/text/iep/IEPForms.htm) - If you're a parent, be sure to download the parent Pamphlet (PDF) about a third of the way down the page.

Pupils' Attitudes Towards Mainstreaming

R.B.L Soni*

This study intended to explore the attitudes of visually handicapped and sighted pupils towards mainstreaming and friendship in one mainstream school of Manchester, UK The sample of the study, which was selected through purposive sampling technique and random selection procedures respectively, comprised of 37 students (17 visually handicapped and 20 sighted) The independent variables for this study were vision, gender, and age, the dependent variable constructed for this study were mainstreaming and friendship. As no standardized instruments suitable for this study could be found, two questionnaires, one for the visually handicapped and one for the sighted, were constructed to measure their attitudes toward mainstreaming and friendship. The results of the study revealed that out of six null hypotheses (three for mainstreaming and three for friendship) only one null bypothesis (boys and girls have the same attitudes toward mainstreaming) was rejected, and girls were found to have more positive attitudes toward mainstreaming than boys. There were no significant differences between the attitudes of visually handicapped and sighted, and younger and older pupils, However, the mean scores indicated that younger pupils were more positive in their attitudes toward mainstreaming and friendship compared with the older pupils, and some times higher some times lower for visually handicapped compared with sighted.

In a country like the United Kingdom, providing education to all children, including the handicapped, is mandatory, and failing to do so means facing legal punishment. Therefore, it is not the question of meeting the goal of education for all, but the question of how a handicapped child should be provided

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* *Reader*, Department of Elementary Education, National Council of Educational Research and Training, New Delhi 110 016

eduction. There are two types of provision for the education of children with disability

1 Provision of special school, and

2 Provision of mainstreaming of visually handicapped with other children in ordinary schools.

According to the first approach, special schools are established for the education of children with visual handicaps. These schools are provided with special equipment and materials, and specially trained staff to teach these children All facilities, including boarding and lodging, are provided to these children; but the disadvantage is that these development of children in the very formative years The second approach mainstream education advocates that all students, including children with visual handicaps, must attend normal schools along with other normal children, and requisite support in the form of teachers and special materials be provided to them This approach does not lend support to separation of visually handicapped children from their families and believes that mainstream education will ensure the normal development of these children. It is necessary to understand the meaning of mainsteam education and other terms that are used for integration before proceeding further.

Different countries use different terminologies for mainstreaming. For instance, the term "Mainstreaming" is used in the United States (Benton, 1984), in Scandinavian countries, the term "normilization" is used (wolfensberger, 1972). In European countries, the term 'integration' is popular and widely used for providing education to children with handicaps in ordinary schools. In recent years, the term "inclusion" has been used for integration in Canada (Soni, 1993). Although there is some difference in these four terms, yet the ultimate aim of all these terms is to educate children with disabilities in regular schools and accept them as a part of general school system. Thus, children with disabilities are accepted as the responsibility of the school, which is the basic philosophy of inclusion

One group of professionals advocate for special school approach, whereas others favour mainstream education in ordinary schools. There has been a controversy among the professionals over the issue of mainstreaming ever since this movement began; however, the demand for mainstreaming seems to be growing more than ever before, and there is a worldwide consensus now for mainstream education of the disabled alongside non-disabled children (UNESCO, 1988) However, the decision of placing a visually handicapped child into mainstream education setting or special school setting must be made on the basis of her/his special needs and preference and her/his opinion must be taken into account.

Madge and Fassen (1982) state that studies carried out on integration of children with disabilities tend to concentrate strongly on the views of professionals; children are rarely consulted to give their opinions. According to the Department of Science and Education in U.K. (1982) "The feelings and the perceptions of the child concerned should be taken into account".

Highlighting the need for considering children's opinions while placing them into one or the other setting of education, Cornell (1987) states that pupil involvement is necessary to ascertain whether a child is better placed at mainstream rather than at a special school Fish (1989) also stresses that educational needs of children should be decided not on the basis of what professionals think, rather, on the basis of what children actually need. He, nevertheless, asserts "Completely separate special ducation, however the need, is a very inadequate preparation for life in the community" (p.67).

The process of mainstreaming, however, depends on the attitudes of teachers, school administration and society Pupils' attitudes towards the mainstreaming of the visually handicapped are crucial, as mainstream ducation has to take place among the pupils. There is paucity of research on pupils' attitudes toward mainstreamin, and therefore, attitudes of visually handicapped and sighted pupils toward mainstreaming are not known. Hence, it is essential to investigate the attitudes of visually handicapped and sighted pupils toward mainstreaming.

The importance of attitudes toward perceptions of disabilities has increasingly been emphasized in research (Garvar and Schnelkin, 1989). This is because the particular perceptions and attitudes that people hold may have profound effects on the adjustment and education of those with disabilities (Bartel & Guskin, 1971; Bowe, 1978; Siller, 1976; Wright, 1983) Educational placement decisions for youngsters with handicapping conditions may also depend on how these youngsters are viewed by individuals involved in the educational processes It is well known that attitudes play a very significant role in determining adjustment, success or failure of a child in education, and consequent personality formation and self-concept of that child. Hence, research studies on pupils' attitudes toward mainstreaming are very important.

Most of the studies have concentrated on the opinions of professionals, but very few studies have taken care of the opinions of pupils toward mainstreaming If mainstreaming is to be successful, positive attitudes from disabled and non-disabled pupils are essential Furthermore, the opinion of the child in her/his educational placement is important. Unfortunately, pupils' views are not considered when deciding their educational placements. The feelings and perceptions of the child concerned should be taken into account and the concept of partnership should, wherever possible, be extended to cover children and young persons (Department of Science and Education, 1983).

A number of research findings have indicated that many individual children in integrated education settings were accepted by their peers (Jamieson et al., 1977) A study was conducted in ten schools in Greater Manchester between 1977-1984 in two phases. The study was carried out on 50 hearing impaired pupils, 40 ordinary pupils, and 45 class teachers There was general acceptance of hearing impaired pupils in ordinary classrooms by their peers, but both hearing impaired and normal pupils resented too much attention being paid to the hearing impaired by teachers (Lynas, 1986) Gottlieb (1980) and Gillies and Shackley (1988) reported of positrye attitudes from mainstream pupils to ward the integration of their peers with learning difficulties. In both cases, there had been sensitization of the pupils toward disabilities and learning difficulties before the mainstreaming took place

Sandberg (1982) conducted a study in four elementary schools of USA. He selected 400 subjects from grades four, five, and six. Two of the schools housed special classes for the trainable mentally retarded (TMR) whereas the other two did not The results indicated that there was no significant group difference in the attitudes toward TMR Students. Boys, however, were significantly less positive than were girls, and sixth grade students were less positive than were fourth or fifth grade students. School (1986) states. "The integration of today's visually handicapped children and youth in regular school programs and activities should help both sighted and visually handicapped persons develop more positive attitudes toward each other" (P. 24).

Rich et al (1984) undertook a large-scale study using the Israeli Quality of School Life Scales, which had been tested for both reliability and validity. Results indicated that disabled pupils, who had been integrated, were happy with integration as a practice and principle, but were very dissatisfied with their mainstream teachers. Buckingham and Mittler (1987) found the high level of resentment in the physically disabled pupils for having been educated in a special school rather than in an ordinary school. Booth and Potts (1983) and Booth, Potts and Swann (1987) also reported to positive attitudes toward mainstreaming. Lewis (1990) also found that six and seven year old mainstreamed children either sustained or increased in their liking for and their acceptance of the children with severe learning difficulties over a year of integration Teachers played an important role in the acceptance of severe learning difficulty (SLD) children by pairing one SLD and one mainstreamed child. Another study by York (1992) was carried out in two middle schools of Minnesota, USA in which eleven regular teachers and seven special teachers were involved. The number of non-disabled subjects taken for this study was 181. The subjects were given open-ended questionnaires to find out their responses towards the mainstreaming of children with disabilities. The results suggested that 89 5% agreed with the idea of mainstreaming of disabled children into regular classroom, 5.52% disagreed and 4 98% gave other responses. There was a consensus among the teachers for mainstreaming of disabled children into regular classrooms

It is clear from the above cited research findings that increased contacts of non-disabled children with disabled children can create an awareness of the potentialities of the disabled, the this association of the non-disabled children with disabled children would ultimately lead to the acceptance of disabled children into ordinary schools.

A few research studies reveal contrary results. These studies suggest that pupils with disabilities are not accepted by their normal peers. Goodman, Gottlieb and Harrison in 1972 used sociometric questionnaires to study the social acceptance of 36 mildly retarded male and female students who were integrated into a non-graded elementary school. They concluded that both integrated and segregated retarded pupils were rejected more frequently than non-retarded pupils were Younger non-retarded pupils accepted mildly retarded pupils better than older pupils did On-retarded pupils accepted mildly retarded pupils better than older pupils did Integrated retarded pupils were rejected significantly more often than segregated ones by non-retarded male pupils, but not be non-retarded female students (Frith and Mitchell, 1981) Monbeck in 1973, Mirtley in 1975, Livneh in 1984, Siller in 1984 and Tuttle in 1984 found that attitudes toward the handicapped, including those with visual handicaps, tend to be negative (Scholl, 1986).

In England and Wales, a longitudinal study was carried out from 1973-1985 on an initial sample of 120 blind and partially sighted children from 17 special schools, dwindling to 99. The pupils were subjected to experimental tasks and tests and a final video recorded interview on one to one basis. In the study, 68% pupils expressed their views in favor of special schools, 7% for mainstream, and 25% were uncertain (Tobin, 1987) Baud (1980) carried out a research on 421 non-handicapped children from five school districts in North and South Carolina in USA to assess their attitudes toward visually impaired and hearing-impaired students The two Likert-type attitude scales were designed to assess their attitudes. In general, the expressed attitudes of non-handicapped students to ward the visually impaired and hearing impaired students were neutral. Driggers (1983) examined the relationship between inappropriate behaviour of blind and low vision children and their social acceptance by sighted peers in the regular classroom. Sixteen blind and low vision subjects and 191 of 353 sighted classmates participated in the study Sociometric measurements were made on to all subjects to determine the level of social acceptance. An observational approach was also used to measure frequency of inappropriate behaviour of the blind and low vision children. The results indicated that the blind and low vision children were less well accepted by their sighted peers in regular classrooms Inappropriate behaviour could be one of the reasons for low acceptance of the children, but these behaviours cannot be solely responsible for negative attitudes toward them

Hazard (1983), and Donaldson (1988), also found negative attitudes from mainstream pupils toward pupils with physical and/or learning difficulties. Graffi and Minnes in 1981 who reported negative attitudes toward physically and mentally handicapped children from their non-handicapped peers. Graffi and Minnes studied 80

Kindergarten and 80 third grade pupils The age range of the Kindergarten children was 4-6 years and the age range of the third graders was 8-9 years Results suggested that both Kindergarten and third grade children in the study were significantly less positive in their attitudes toward a child who was labelled "mentally retarded" No difference in the attitudes of male and female pupils toward mentally retarded was found A longitudinal study was conducted in German speaking regions of Switzerland on 1863 fourth and fifth grade pupils Results suggested that neither the length of integration nor the specific form of schooling changed the negative social status

The purpose of this study was to investigate the attitudes of visually handicapped and sighted pupils toward mainstreaming and friendship in Manchester UK. The study also compared the attitudes of younger and older pupils, and the attitudes of boys and girls toward mainstreaming and friendship

Method

Sample

One mainstream school in Manchester UK, which provides minimum educational facilities in the form of special teacher and equipment to the visually handicapped pupils, was selected for this study. The sample of 37 pupils, 20 sighted and 17 visually handicapped, was selected from this mainstream school in Manchester The sample included 12 boys and 8 girls among the sighted, and 9 boys and 8 girls among the visually handicapped Random selection technique was used in the selection of sighted pupils, as it is the most scientific technique to ensure representativeness of the population. However, random selection procedures could not be used for the selection of visually handicapped sample, as the number of visually handicapped pupils in this mainstream schools was very limited. Therefore, purposive sampling technique was used in the selection of visually handicapped pupils. The sample of the study was drawn from the classes where both sighted and visually handicapped pupils were studying. Pupils from both sexes were encouraged to participate in the study to find out if gender affects their attitudes toward mainstreaming and friendship

Tools

In order to obtain reliable and valid tools, standardized questionnaires and attitude scales were examined. However, none of them was found to be appropriate for this study due to unsuitability of content an/or format Therefore, the researcher decided to develop two questionnaires in order to elicit responses from visually impaired and sighted pupils toward mainstreaming and friendship. Two questionnaires, one for visually handicapped and one for sighted pupils, were designed on Likert-type Scale ratings, which employs levels of agreement usually with a five-response category.

The researcher used the Liker-type Scales because of its advantages in carrying out survey research. Each questionnaire contained 16 questions including one open-ended question designed to seek responses with regard to attitudes toward mainstreaming and friendship. The researcher conducted pilot study, item analysis, and reliability analysis to establish reliability of the tools. The researcher had a thorough discussion with special teachers to establish the validity of the tools Reliability analysis was carried out separately for mainstreaming and friendship Cronback's reliability coefficient (alpha) was calculated for each measure, including all relevant questions and then dropping each question in turn. All items showed correlation coefficient with mean score significant at 1% level. Pearson Correlation coefficient was significant at 0.1% level except for question 7 (group activities with visually handicapped), 14 (easy to talk to), and 15 (visually handicapped to attend ordinary school). Pearson and Superman correlation coefficients showed broadly same behaviour.

Variables

In this study, the independent variables were defined groups within the subjects. The purpose was to see whether the groups differed with regard to dependent variables, which were constructed to measure items of interest The independent variables in the study were gender, age, and vision. The dependent variables in this study were mainsteaming and friendship.

Procedure

The process of data collection began by contacting the authorities in mainstream school. The Head Master of the mainstream school was contacted to seek the permission to conduct the study and he permitted the investigator to carry out the research. The questionnaires were given to the sighted pupils to complete them during free periods. As most of the visually handicapped pupils were partially sighted, they themselves completed the questionnaires and handed in to the teacher. The totally blind were provided some one to read the questions and record their answers. All the pupils, both blind and sighted, were very happy and cooperated during the study

Data Analysis and Results

The whole sample was divided into groups subgroups; these were gender (male and female); age (11-13 and 14-16 years), and vision (visually handicapped and sighted) The three independent variables were gender, age and vision, and the dependent variables for this study were mainstreaming and friendship The samples were analyzed the data For each of the questions 2-15, the Mean and Standard Deviation were calculated Question 16 intended to seek opinions of pupils on the benefits and problems in mainstream education setting. This was an open-ended question and, therefore, it was decided not to apply statistical analysis on this question Analysis of Variance (ANOVA) and t-tests were used to test main hypotheses on mainstreaming and friendship. The following hypotheses were formulated for this study:

1 Visually handicapped and sighted pupils have the same attitudes toward mainstreaming

2 Boys and girls have the same attitudes toward mainstreaming

3. Younger (11-13 year old) and older (14-16 year old) pupils have the same attitudes toward mainstreaming

4. Visually handicapped and sighted pupils have the same attitudes toward friendship

5 Boys and girls have the same attitudes toward friendship

6 Younger (11-13 year old), and older (14-16 year old) pupils have the same attitudes toward friendship

Table 1 shows mean values for questions 2-15

Overall, mean scores were lowest for questions 11 and 12, which concerned home visits, scores were highest for questions 14 (easy to talk to) and 15 (visually handicapped to attend ordinary school) Mean scores were higher visually handicapped pupils than for sighted pupils for questions 7 (group activities),

Table 1: Mean Values for Questions 2-15

	Question		*Visually Handicapped*	*Sighted*
2	Age in Years	No	16	29
		Mean	12.9	12.5
3	Friendliness to Visually imparired	No.	17	19
		Mean	3.9	4.4
4	Help to visually impaired	No	17	19
		Mean	3.9	3 5
5.	Tell visually impaired what is going on	No.	17	20
		Mean	3 9	3.3
6	Tease, bully, call names	No	17	20
		Mean	3 5	4 4
7.	Group activities with visually impaired	No.	17	18
		Mean	3 6	3.3
8	In company of visually impaired	No	17	17
		Mean	3 9	3 3
10	Read to Visually impaired	No.	15	20
		Mean	3.3	3 0
11	Visit Visually impaired at their home	No	17	20
		Mean	1 6	1 2
12.	Invite visually impaired to house	No	17	20
		Mean	1 9	1 4
13.	Make jokes with visually impaird	No.	17	20
		Mean	3.2	2 7
14	Easy to talk to	No.	17	20
		Mean	4 1	4 3
15	Visually impaired to attend ordinary School	No	15	19
		Mean	3 9	4 4

11 (visit at home), and 12 (invite to home). Mean scores were higher for sighted pupils than for visually handicapped pupils for questions 3 (friendliness), 6 (teasing), 9 (help get around), 14 (easy to talk to), and 15 (attend ordinary school)

At Manchester, mean scores for visually handicapped pupils were higher than those for sighted pupils for eight of the thirteen questions, the exceptions being questions 3 (Friendliness), 6 (teasing), 9 (help get around), 14 (easy to talk to), and 15 (attend ordinary school)

Table 2: Numbers and Mean Vaues for Mainstreaming

			Visually Handicapped	*Sighted*	*Total*
Boys	11-13	No	5	8	13
		Mean	19 2	17 5	18 2
	14-16	No	2	2	4
		Mean	17 6	15.8	16.7
Total		No	7	10	17
		Mean	18 7	17.2	17 8
Girls	11-13	No.	5	4	9
		Mean	21 2	23 0	22 0
14-16		No	1	3	4
		Mean	20.3	17 9	18 5
Total		No	6	7	13
		Mean	21 0	20.8	20.9
Total boys & Girls		No	13	17	30
		Mean	19 8	18 7	19.2

Mean values for mainstreaming tend to be higher for girls than boys, tend to be higher for younger than older age group, and some times higher some times lower for visually handicapped compared with sighted.

Table 3: Numbers and Mean Vaues for Friendship

			Visually Handicapped	*Sighted*	*Total*
Boys	11-13	No	5	8	13
		Mean	20.9	19.2	19.9
	14-16	No.	2	2	4
		Mean	20.4	17.8	18.8
Total		No.	7	10	17
		Mean	20.8	18.8	19.6
Girls	11-13	No.	5	4	9
		Mean	22.7	24.2	23.3
	14-16	No	1	3	4
		Mean	22.5	18.9	19.8
Total		No.	6	7	13
		Mean	22.6	21.9	22.2
Total boys &		No	13	17	30
Girls		Mean	21.6	20.1	20.0

Mean values for friendship tend to be higher for girls than boys, tend to be higher for younger than older age group and some times higher, some times lower for visually handicapped compared with sighted.

Table 4: Pairwise Comparisons for Mainstreaming

	No.	*Mean*	*SD*	*F*	*Sig*	*t*	*DF*	*Sig*
Agegroup				1.08	0.981	1.45	28	0.158
11-13 yrs	22	19.7	3.6					
14-16 yrs	8	17.6	3.5					
Gender				1.71	0.353	-2.52	28	0.018
Boys	17	17.8	3.7					
Girls	13	20.9	2.8					
Vision				1.15	0.781	0.84	28	0.406
V H	13	19.8	3.8					
Sighted	17	18.6	3.5					

The null hypothesis that younger and older pupils have the same attitudes toward mainstreaming was not rejected The null hypothesis that boys and girls have the same attitudes toward mainstreaming was rejected The null hypothesis that visually handicapped and sighted pupils have the same attitudes toward mainstreaming was not rejected. F-test found no significant difference the variance of the two levels for each of age group, gender, and vision.

T-test showed that girls had significantly higher mean scores than boys for mainstreaming, but there was no significant difference between age group or between vision group

Table 5: Pairwise Comparisons for Friendship

	No	*Mean*	*SD*	*F*	*Sig*	*t*	*DF*	*Sig*
Agegroup				1 39	0 518	1 23	28	0 230
11-13 yrs	22	21 3	3 8					
14-16 yrs	8	19 3	4 4					
Gender				2 48	0.117	-1 88	28	0 070
Boys	17	19 6	4 4					
Girls	13	22 2	2 8					
Vision				1 31	0 601	1 08	28	0 281
VH	13	21.6	4 2					
Sighted	17	20 1	3 7					

The null hypotheses that younger and older pupils have the same attitudes toward friendship, boys and girls have the same attitudes toward friendship, and visually handicapped and sighted pupils have the same attitudes toward friendship were not rejected. F-tests found no significant difference between the variances and t-tests found no significant difference between the mean values of the two levels for each of age group, gender, and vision

Discussion

The study set out to investigate the attitues of visually handicapped and sighted pupils toward mainstreaming and friendship It also investigated the differences, if any, in the attitudes of boys and girls, and younger and older pupils toward mainstreaming and friendship Six null hypotheses (three relating to mainsteaming and three relating to friendship) were formulated and were tested at 0 05 level of significance.

Question 3 "friendliness" was given to explore if mainstreaming helps to develop friendship between visually handicapped and sighted pupils. Responses to the question 3 revealed that 28 of the 36 pupils answered either "very friendly" or "friendly". The mean scores for question 3 indicate that the sighted pupils found the visually handicapped more friendly than vice-versa The question arises as to why visually handicapped pupils were found to be friendlier than the sighted Individual differences exist among the visually handicapped people as they exist among the sighted. A possible explanation for being friendly could be hat visually handicapped pupils in the mainstream schools want to have friends, it would be difficult for them to make friends unless they themselves are friendly. The visually handicaped, perhaps, had higher expectations from the sighted This is why they did not find sighted pupils as friendly as they anticipated

Susan and Rizzo (1979) assert that when visually handicapped and sighted children learn together, they are likely to cultivate love for each other. Friendship among the pupils is determined by their likings for one another and, therefore, learning together does not mean that friendship will automatically develop among the pupils. There is a need for concerted effort to promote integration and friendship betwwen handicapped and non-handicapped pupils in mainstream schools. Supporting integrated education the United Nations World Programme of Action Concerning Disabled Persons (1983) states "Wherever pedagogically possible, education should take place in the ordinary school system" (p.7). Substantiating this statement Johnson and Johnson (1986) state that when cooperative learning is implemented effectively and interaction between the disabled and non-disabled is encouraged during the free time, positive relationships and friendships between the disabled and non-disabled are likely to develop. CSIE (1992) states that children do better academically and socially in integrated settings. Only integration has the potential to reduce fear and promote friendship, respect, understanding, and cooperation The current research concentrated on studying mainstreaming and friendship between handicapped and non-handicapped pupils in the mainstream school.

Question 4 related to the help given by the sighted and that received by the visually handicaped in the mainstream school. Out of 36 pupils spending, 19 reported help to the visually handicapped "very often) or "often". The mean scores for this question suggest that the sighted pupils believed that they were less helpful than that experienced by the visually handicapped.

Question 5 related to the information given to the visually handicapped in the classroom by their classmates. Twenty of the thirty-seven puils reported that the visually handicappd were told about the activities in the classroom either "very after" or "often" The sighted peers must have been caring and sensitive to the needs of the visually handicapped and they may have provided visual information to them quite often. The mean scores suggest that the sighted pupils felt that they gave less information than that perceived by the visually handicapped. As most of the visually handicappd pupils in Manchester mainstream school were partially sighted, they did not need the help of sighted for reading notice board etc. This is the reason why the sighted pupils felt that they did not provide enough information to their visually handicapped classmates.

Question 6 relating to teasing, bullying or name-calling was asked both from visually handicapped and sighted pupils. Twenty-four of the thirty-seven pupils reported teasing or bullying "never" or "rarely". The mean scores revealed that the visually handicapped were teased more than the sighted. Howerver, teasing in general appears to be rare. Thus, it conforms to the findings of Hegarty and Pocklington (1981) who reported that teasing and bizarre mannerisms in integrated education settings were comparatively rare.

There could be two forms of teasing, friendly and unfriendly If is the former, both the teased and the one who teases, enjoy it, on the contrary, if it is the latter, the teased suffers mental along. If teasing is friendly and enjoyed by concerned pupils, it indicates mainstreaming and friendship. On the other hand, if it is negative, it suggests the contrary is true.

Question 7 intended to explore group activities between visually handicapped and sighted pupils. Among the 35 pupils answering the question, 16 reported group activities "very ofter" or "often", while 14 replied "some times". The mean scores indicate that there were group activities in the mainstream school of Manchester. As far as group activities are concerned, they are determined by the school administration. The group activities outside the school, however, depend on many factors, such as distance between homes, parental attitude toward disability and the intimacy that exists between friends.

Question 8 was worded differently for visually handicapped and sighted pupils. The visually handicappd were asked, "are you ever in the company of visually handicapped pupils". The scores for the visually handicapped were reversed. Out of 36 pupils responding, 17 reported that visually handicapped and sighted pupils were in company "very often or "often". The mean scores suggest that both visually handicapped and sighted pupils felt that they spent the same amount of time with each other.

Question 9 related to the help given by the sighted and received by the visually handicapped in getting around the school. The responses of the 36 pupils were evenly spread amongst the five Likert-Scale categories. Only 15 pupils replied that the visually handicapped were helped "very often" or "often". The mean scores indicate that the visually handicapped felt they received less help in getting around the school from the sighted than the sighted felt they gave The vision loss could be moderate to severe, and accordingly, a person may or may not need help in getting around. The difference in mean scores of visually handicapped and sighted pupils indicates that low vision pupils may also need the help in getting around. The amount and frequency of help needed would depend on the degree of loss of vision. The mean scores does not necessarily imply that he sighted pupils were less helpful in the mainstream school; rather, less help may have been offered on account of lack of awareness among the sighted pupils toward the needs of the visually handicappd.

Question 10 related to reading books, notices, and information on the black board to the visually handicapped by the sighted pupils Only 14 of the 35 pupils answering question 10 replied that the visually handicapped were read to "very often" or "often". The mean scores suggest that the sighted pupils believed that they gave less information to the visually handicapped than the visually handicapped felt they received.

As many of the visually handicapped pupils could read large print and information no notice board, this reduced excessive dependence on the sighted for access to information.

Question 11 related to visiting visually handicapped pupils at home by their sighted peers Out of 37 pupils, 30 reported that the visually handicapped were "never" visited at their home. The mean scores show that the visually handicapped felt that they were visited by their friends, whereas the mean scores of the sighted suggest that they paid less visits The visually handicapped pupils may have developed friendships with some sighted pupils and they may have been visiting them occasionally The visit by some sighted friends may have made the visually handicapped feel that their friends visited them

Question 12 related to inviting handicapped pupils to their house by sighted classmates. Twenty-five of the thirty-seven pupils reported that the visually handicapped were "never" invited house by sighted classmates A similar discrepancy in the mean scores has occurred, as it was in question 11 The same reasons given for question 11 may apply here also. Questions 11 and 12 indicated that visually handicapped pupils were rarely visited at home, or invited to their sighted classmates' house The two factors may have affected visits and invitations to homes. These are

1 The friendship that exists between pupils and
2 The distances between the places where they live

Question 13 related to making jokes by visually handicapped and sighted pupils with each other. The responses of the 37 pupils were evenly spread amongst the five Liker-Scale categories, the most popular response being "some times". The mean scores revealed that the sighted made more jokes with the visually handicapped than the visually handicapped made with the sighted. Making jokes implies that the process of mainstreaming and friendship is in progress Jokes are made with friends, and the mean scores indicate that visually handicapped and sighted pupils are moving toward friendship and mainstreaming The visually handicapped, however, made less jokes compared with the sighted The main reason for this difference could be attributed to their consciousness for not doing something that may offend others It is the responsibility of the parents and teachers to ensure the normal development of visually handicapped children

Question 14 tried to explore how comfortable visually handicapped and sighted pupils felt in talking to each other. The results indicated that majority was at ease when talking to each other. Of the thirty-seven pupils, sixteen replied "very comfortable" and fourteen replied "comfortable". The mean scores indicate that both visually handicapped and sighted pupils felt equally at ease when communicating with each other This suggests that the mainstreaming of the visually handicapped is not difficult provided right type of environment is created and appropriate educational facilities are made available.

The wording of question 15 was the same for visually handicapped and sighted pupils "Is it at all important for visually handicapped pupils to attend an ordinary school rather than a special school"? Of the thirty-four pupils answering the question, twenty-seven thought it "very impotent" or "important" The mean scores indicate that the sighted pupils felt it more important for visually handicapped pupils to attend an ordinary schools than the visually handicapped themselves thought It is astonishing to know that the visually handicapped felt i less important for them to attend an ordinary school despite the fact that educational facilities are available in Manchester Two factors may have affected their responses·

1 Socio-culture makeup which means how the visually handicapped perceive themselves in relation to other pupils and
2 Individual difficulties in their education.

The results of this study to not conform to the statement of Ray (1985) that mainstreamed handicapped pupils are not socially acceptable to their non-handicapped peers. However, current findings agree with the results of York et all. (1992) who conducted a study in two middle schools of Minnesota USA and found that 89.5% agreed with integration of the children with mental handicaps 5.52% disagreed, and 4 98% gave other responses

Question 16 was an open-ended question, it related to the benefits, and problems experienced by visually handicapped and sighted in the mainstream education setting Both visually handicapped and sighted pupils were asked to express their views on this subject. Out of the 17 visually handicapped pupils, 8 stated that they had an opportunity to meet different pupils in mainstream school and make friends Six pupils reported equal treatment and help from teachers Three pupils said they got a chance to develop independence and two reported of interesting activities in mainstream school. Two pupils comparing special and mainstream schools said that they were not being patronized in mainstream school, as they were in special school One pupil said that the mainstream school offered a greater choice of subjects to study, whereas two said that there better resources and facilities in the mainstream school.

The majority of sighted pupils in mainstream school stated that they were benefited by the presence of visually handicapped pupils in the class Repetition helped them understand the classroom teaching better One pupil said that mainstreaming helped her to understand the problems of the visually handicapped, and it helped other pupils to be caring and sensitive help from visually handicapped pupils in studies. Two pupils said mainstreaming tables the sighted pupils to understand that the visually handicapped are not different from them.

The responses given by pupils conform to the findings of Sasso and Rude (1988) who conducted a study on 24 non-handicapped and 12 severely handicapped pupils and found that mainstreaming efforts can have positive social effects on non-handicapped participants. However, the results of this study do not conform to the conclusion of the research by Driggers (1983) who found that blind and low vision children were not accepted by their sighted classmates

Stating the problems in the mainstream setting, most of the visually handicapped pupils reported that the sighted pupils had less understanding of the problems of the visually handicapped. Six pupils pointed out that they had problems in reading some teachers' handwritings on the black board. One pupil that some teachers forget to read what they write on the black board. This statement has two connotations.

1. The teachers' handwriting is not clear and partially sighted pupils find it difficult to read.
2. The vision of partially sighted pupils is very low

The problem could be overcome by making slight modifications in teaching methods The teachers may try to write more clearly and in bold letters on the black boar and speak out what they write This will also help pupils with total loss of vision who cannot see the black board.

Some visually handicapped pupils pointed out that there was insufficient special equipment for their education, whereas others stated that encountered difficulties in reading prints and notices. Their reading difficulties clearly imply that those pupils had low vision. The sighted pupils did not notice any major problem with the presence of visually handicapped pupils in their class. One pupil pointed out that if teachers pay too much attention, then the classroom work slows down Similar opinions of pupils have been reported by Lynas (1986).

The mean scores suggest that girls showed more positive attitudes than boys toward mainstreaming did; the mean values tend to be higher for younger (11-13 year-old) pupils compared with older (14-16 year-old) pupils As far as visually handicappd and sighted pupils are concerned, it is difficult to reach any conclusion; but the mean scores for mainstreaming among the visually handicapped pupils tend to very.

The results of this study do not conform to the findings of Budgell's study (1985), reported of a substantial change in the attitudes of pupils with the growth in age toward integration This was reflected, according to him, by the fact that out of 27 Down's syndrome children, one stayed in integration at secondary schools stage, and the rest of the pupils were placed in the segregated provision. It does not, however, imply that placement of these children in segregated provision was determined by negative attitudes of pupils. Furthermore, the attitudes of pupils may be different toward the visually handicapped children

The mean values for friendship suggest similar results as were indicated for mainstreaming. Girls showed more favourable attitude toward friendship than boys and younger pupils tended to be more friendly than older pupils. The visually handicapped showed varying inclinations toward friendship when compared with the sighted

The testing of null hypotheses for mainstreaming revealed that two out of three hypotheses were not rejected The null hypothesis that boys and girls have same attitudes toward mainstreaming was rejected and girls were found to have more positive attitudes than boys toward mainstreaming and younger and older pupils have the same attitudes toward mainstreaming were not rejected as no significant differences were found between visually handicapped and sighted pupils, and between younger and older puils.

Frith and Mitchell (1981) reported the findings of Goodman, Gottlieb and Harrison, who found that younger pupils were more positive toward the mildly retarded pupils than the older pupils were and girls were more positive than boys were. The findings of current study agree with these results that younger pupils were more positive in their attitudes toward integration and friendship compared with the older ones Similarly, the results of this study concerning more positive attitudes of younger pupils compared with older ones conform to the study of Sandberg (1982) who found that girls were more positive toward the trainable mentally retarded pupils than boys and fourth and fifth grade students were more positive than sixth grade students

The null hypotheses concerning friendship between boys and girls, younger and older pupils, and visually handicapped and sighted pupils were not rejected as no significant differences were found between the attitudes of these groups. At Manchester, t-testing showed the difference between the mean values of mainstreaming for boys and girls to be significant, with girls having a higher mean (20 9) than boys (17.8). However, there was no difference detected between the two age groups or between visually handicapped and sighted pupils The results of t-testing did not conform to the results of analysis regarding the differences in attitudes of younger and older pupils toward mainstreaming.

At Manchester, t-testing showed no significant difference between the mean values of friendship for younger and older pupils, for boys and girls, or visually handicapped and sighted pupils

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Relationship of Personality and Personal Factors with Job-satisfaction of Primary School Teachers

SUDESHRA LAHIRI*
DEEPA RANI SAXENA**

Achieving the goal of Education for All (EFA) is possible only when schools provide an encouraging atmosphere for children to get access to school and congenial atmosphere to learn. Teachers in primary school are the most important factor in retaining children in school Teachers' satisfaction in their job serves as a base for interesting learning situation in school which retains children. The study reported in this paper is an investigation of the Job-Satisfaction of Primary School teachers in relation to their Personality and Personal factors. A test for Introversion Extroversion and a Questionnaire for Job-satisfaction were employed on 102 subjects Personal factors, which were taken in to account, were Marital Status and Qualification of primary school teachers. Results showed that there is a significant relation between Job-satisfaction and Introversion-Extroversion. A significant difference was found on job-satisfaction of trained and untrained teachers. Howerver, there is no significant difference on job-satisfaction found in relation to marital status and degrees obtained by primary school teachers

UNIVERSALISATION of Primary Education has been one of the major national concerns in the post-independence era of India. During the last ten years, access to education and retention of children in schools have remained significant

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* *Research Scholar*, Faculty of Education, Banarus Hindu University, Varanasi-221005, Uttar Pradesh

***Reader*, Department of Education, Mahila Mehavidyalaya, Banarus Hindu University, Varanasi-221005, Uttar Pradesh,

factors The issues of retention of children in schools and higher learning attainments require a congenial learning environment as well as professionally qualified and comitted teachers. Because primary education has occupid an important place in national agenda, no programme of educational reconstruction can afford to ignore the importance of primary school teachers.

Job-satisfaction is a recent trend, borrowed from the industry. The term a "Job-satisfaction", as defined in the Dictonary of Education, is the quality, state and level of satisfaction which is a result of various interest and attitude of a person toward his job For the purpose of the present study the term "job-satisfaction" has conceived as the way a person feels about his job. It is generalised attiude towards the job based on evoluation of different aspects of the job.

Many researches have been carried out, recognising the importance of Job-satisfaction of primary school teachers. Khatoon (2000) found that the teacher's personal factors influence his job-satisfaction. Dinham & Scot (1996) revealed that increased age did not predict greater satisfaction. Higher current dissatisfaction and greater decline in safisfaction were both predicted by length of service at curreent school Taylor & Tashakkori ((1994) indicated that school climate has a noteworthy association with job-satisfaction. Findings by Anderman and others (1991) support the theoretical notion that principlas' actions create distinct working evironments within schools, and that these defferent kinds of environments are highly predictive of teacher satisfaction and commitment Gonsalves (1989) studied the job-satisfaction of Primary School teachers of Vasi-Taluka in Maharashtra. The conclusion draw were (i) less than 50% of the teachers were satisfid from their job; and (ii) the reasons for dissatisfaction were transfer to remote places, assignment of tasks such as family planning, survey, preparation of electional roles etc Anand (1977) comes to the conclusion that any explanation of job-satisfaction requires both work role and personality variables These two sets of variables have been recognised as interacting with each other, thereby influencing and determining one's job-satisfaction Singh (1974) discovered that teachers were found to be moderately satisfied with all factors of job-satisfaction, excepting economic benefiets, physical facilities and administration Harrel (1964) classified the determining factors of job-satisfaction into three categories viz, personal factors, inherent factors and factors controlled by management

After reviewing the literature, rarely any study was found on relationship of personality with job-satisfaction of primary school teachers in Indian setup. Individuals differ among themselves. Degree of Introversion-Extroversion which is a component of personality (Eysenck, 1957), also varies from individual to individual. The term 'Introversion', employed by Jung, is characteristic of individuals whose interest is in their own thoughts and feelings, rather than in the world around them similarly, the term 'Extroversion' is characteristics of individuals whose thoughts and activities are directed to things outside the self Therefore, the present study was attempted to investigate the relation of Introversion Extroversion with Job-satisfaction It also examined the influence of marital status the primary school teachers on job-satisfaction to pin-point the problem. At primary stage, while large number of teachers are qualified and trained, the numbers of those who are undertrained under-qualified is also considerable So, the present study has occupied its importance to provide empirical evidence for Job-satisfaction of Primary School Teachers.

Objectives

1. To find out the relation between personality and job-saisfaction of primary school teachers.
2. To find out the job-satisfaction of primary school teachers in relation to their marital-status
3. To find out the job-satisfaction of primary school teachers in relation to their qualification.

Sample

The study was carried out by randomly selecting 102 primary school teachers of Varanasi City. The sample consisted of 39 male and 63 female teachers, teaching in primary schools.

Instrument Used

The following instruments were used for collecting the data.

1. **Teacher Job-Satisfaction Questionaire:** The questionnaire developed by Kumar & Mutha (1973), was found suitable for collecting essential data It consisted of 29, highly discriminating, 'Yes-No' types of items Although questionnaire was prepared both in Hindi and English, for the sake of Hindi speaking states, Hindi version of the questionnaire had been used.
2. **Introversion-Extroversion Test:** The test, developed by M C. Joshi, consisted of 50 statements, which were responded on 3-point scale.

Procedure

The Job-Satisfaction Questionnaire and Introversion-Extroversion Test, together, were distributed among selected primary school teachers. On Job-Satisfaction Questionnaire, all the items are given a score of "I" for positive response excerpt for items 6 and 29, in which case reverse is applicable. The sum of these values given the job-satisfaction score for the subject. The total score varies from 0 to 29, showing lowest to highest job-satisfaction for the subject. For Introversion-Extroversion Test, subject had to give which was applicable to him in three-point scale: (+), (?) and (-) Score was obtained by adding 50 to the number of pluses and subtracting the number of minuses. Question marks had to be disregarded Higher the score of the subject, more Introvert the person was.

Statistical Analysis

Data thus obtained for Introversion-Extroversion and Job-Satisfaction were scrutinised before applying the statistical techniques To investigate upon the relation between job-satisfaction and Introversion-Extroversion, correlation coefficient was computed. Furthermore, t-test was used to find out the relation between job satisfaction and other personal factors, i.e., marital status and qualification of the teacher.

Result and Anlysis

Data were analysed to investigate the relationship between Introversion-Extroversion and Job-satisfaction Higher the score of a person on Introversion-Extroversion Test, more Introvert he was Similarly, higher the Score of the person on Job-satisfaction, more satisfied he was with his job The results in Table 1 reveals the relationship between Job-satisfaction and Introversion-Extroversion.

It is interesting to note that job-satisfaction of primary school teachers are negatively correlated with Introversion-Extroversion. Negative correlation coefficient reveals that extrovert teachers are more satisfied with their job than the introverts. Correlation coefficients, r, between job-satisfaction and Introversion-Extroversion is significant at 0 01 level of confidence Table 1 further suggests that in spite of having negative correlation, job satisfaction of male primary school teachers is not significantly related with Introversion-Extroversion at 0.05 or 0 01 levels of confidence Similarly, Table 1 revals that inspite of having negative correlation, job-satisfaction of female primary school teachers is significantly related to Introverstion Extroversion at 0 01 level of confidence

Table 1
Relationship between Job-satisfaction and Introversion-Extroversion

S No.	*Variables*	*Mean*	*Corelations*	*Significant Level*
1	Jobsatisfaction	17 1147		
2	Introversion-Extroversion	56.4754	-0 37167	Significant at 0.01
1	Jobsatisfaction (Male teachers)	17.7857	-0 3146	Insignificant at 0.01 and 0 05
2	Introversion-Extroversion (male teacher)	55 2857		
1	Job satisfaction (Female teachers)	16.8	-0 3146	Significant at 0 01
2.	Introversion-Extroversion (Female teachers)	55 9		

To study the relationship between job-satisfaction and marital status of the primary school teachers, means and S.Ds of job-satisfaction of married and unmarried were computed and further subjected to t-test. Details are given in Table 2

Results from Table 2 reveal that mean score of Job-satisfaction of married and unmarried primary school teachers are 16 655 and 18.5882, respectively. It shows, Unmarried teachers are more satisfied with their job than married teachers. When subjected to t-test to find out the significant difference between means, t-value obtained is 1 8568. It suggests that there is no significant difference in the job-satisfaction of married and unmarried primary schools teachers

To study the relationship between job-satisfaction and Qualification of the Primary School Teachers, means and S Ds were computed for teachers having Bachelor's and Master's degree The data were further subjected to t-test, details are given below in table 3

Results from Table 3 reveal that mean scores of job-satisfaction of teachers having Bachelor's and Master's degree are 18.2130 and 17 6958, respectively. When subjected to t-test to find out the significant difference between means, value obtained is 0 52390. This shows that job-satisfaction of teachers having Bachclor's degree are more than those having Master's degree But t-value suggests that there is no significant difference between the job-satistaction of Primary school teachers having bachelor's and masters degree

Table 2
Comparison of mean job-satisfaction of married and unmarried Primary School Teachers.

S No	*Qualification*	*N*	*Mean*	*SD*	*t*
1.	Married Teacher	58	16 655	6.3457	
2	Unmarried Teacher	44	18.5882	4 1413	1.8568

Table 3
Comparison of mean job-satisfaction of teachers having bachlor's and master's degree

S.No.	*Qualification*	*N*	*Mean*	*SD*	*t*
1	Bachlor's Degree	49	18.2130	4.1413	
2.	Master's Degree	53	17.6958	5.6345	0.52390

Qualification of teachers also includes the degree of B Ed or other certificate of training in Education, i e., trained and untraind teachers. Means and S Ds were computed for job-satisfaction of trained and untrained teachers. The scores were further subjected to t-test The results are shown in Table 4.

Results from Table 4 reveal those mean scores of job-satisfaction of trained and untrained teachers are 17 and 20.7, respectively. When t-test was computed to find out the significant difference between means,value obtained is 2 8367. This shows job satisfaction of untrained teachers is higher than trained teachers Thus, job-satisfaction of untrained teachers is significantly different from trained teachers.

Discussion

Whele ensuring the quality education to students, it is necessary to improve the condition and quality of teachers in school. While we are talking of 'Universalisation of Primary Education', it is important to find out whether teachers are satisfied with their job and pinpoint their problems. When total sample of primary school teacher is taken into account, the present study reveals that there is a significant relation between job-satisfaction and Introversion-Extroversion, which is a component of personality. Analysis on the basis of personality of the teacher, i.e. Introversion-Extroversion, Job-satisfaction is negatively related with introversion. As the degree of introversion increases in a teacher, he is less satisfied with his job. According to Jung, both introvert and extrovert tendencies are present in the personality of an individual but on of them is found to be dominant, thus making the person into a particular type Going furthers into the task of classifying types, Jung associated a person's omtrpvert and extrovert orientation with focus in main behavioural functions, namely, thinking, feeling, sensation and intuition, So, low job-satisfaction of introvert teachers can be supported by description of personality type given by Jung. According to Jung, introverts are theoretical, detached and aloof (thinking). He further revealed that introverts posses refined tastes and interests but quite choosy and fussy about the things the like (sensational). Similarly, high job-satisfaction of

Table 4
Comparison of mean job-satisfaction of trained and Untrained Primary School Teachers

S.No	*Qualification*	*N*	*Mean*	*SD*	*t*
1.	Trained	54	17.6	6.5416	
2.	Untrained	48	20.7	6.6065	2.8367**

** Significant at 0 01 level

extrovert primary school teachers can be supported by Jung's personality descriptions of extroverts. According to his description, extroverts are realistic and practical (thinking) and more social (feeling) Moreover, they are attracted by future possiblilities of gain and take risk or gamble

It is interesting to note that relation between job-satisfaction of male teacher and Introversion-Extroversion is negative but not found significant.

Whereas, job-satisfaction of female teacher is significantly related to Introversion-Extroversion although negatively related This suggests that job-satisfaction is related with personality in relation to gender of the tacher. Gender plays a significant role in job-satisfaction of teacher. This is supported by studies conducted by Khatoon & Hasan (2000) and Robinson (1957) who concluded that Woman teachers are more satisfied with their job than the male teachers. It is noteworthy that these studies did not consider relation of job-satisfaction with personality with respect to gender of the teacher. Thus, results in Table 1 in relation to gender can be supported by societal expectaions and dual responsibility of home and work front often make a female teacher saturated. They become less choosy and have restricted aspiration. Not only this, gender roles e.g. sympathic, loyal, sensitive to the need of the others, understanding, gently etc. are the traits which describe feminine personality (e.f. Bem sex Role Inventory) Similarly, masculine gender roles are, defend own belief, independent, assertative, individualistic etc , given in Bem Sex Role Inventory. These gender roles condition personality of the person. These personality traits, exclusive for male and female may describe the difference in job-satisfaction.

In present study, it is found that there is no significant difference between job-satisfaction of married and unmarried School teachers. This contradicts the study made by Lavingia (1974) who investigated that there is a significant difference in the job-satisfaction of unmarried teachers and married teachers This may be due to difference in sample, content of the tool and elapse of time since then The means of job-satisfaction suggests that unmarried teachers are more satisfied than married teachers. Married teachers have to balance tetween the dual responsibility of home and work front. On the other hand, unmarried teacher has the avenues for exploration. This supports the higher job-satisfaction of unmarried teacher although the difference in job-satisfaction is not significant with respect to marital status of primary schools teachers.

Qualification of teachers means bachelor's and master's degree possessed by teachers. It further divided the sample into two groups i.e., trained and untrained teachers It is evident from Table 3 that there is no significant difference in the job-satisfaction of teachers havin bachelor's and master's degree. Although, there is very small difference between the means of job-satisfaction of the trained and untrained teachers. Teachers in primary classes hardly require any post-Graduate degree. Limited vacancies, satuation and adjustment with their circumstances may be responsible for the insignificant difference in the job-satisfaction of teachers having bachelor's and master's degree. Moreover it is evident from the academic profile of teachers that most of them possess their maste's degree. Moreover it is evident from the academic profile of teachers that most of them possess their master's degree in subjects which are not taught in school.

Further scrutiny on qualifications of primary school teachers reveal that there is a significant difference in job-satisfaction of trained and untrained teacherrs Mean scores of job-satisfaction shows that untrained teachers are more satisfied than trained techers This result is supported by study made by Khatoon (2000) inspite of difference in sample chosen. Khatoon (2000) investigated that untrained teachers are more satisfied than trained teachers in secondary schools. Trained teachers, holding B.Ed. degree, are eligible for teaching in primary schools. Moreover, in most of private schools (School which are not aided by Government) appoint teachers those who don't possess B Ed degree and they enjoy the equal status with the trained techers This amply explains the lower satisfaction of trained teachers. The equal status and service conditions of trained teachers with untrained, inspite of having adequate qualification, generates dissatisfaction among trained teachers.

The trend, which has observed in the study, the personality trait has relationship with job-satisfaction It indicates that a person should accept their profession according to their personality trait and not as per available option. Similarly, it is a matter of serious consideration that trained teachers exercise equal social status and service condition with untrained teachers. So, training of teachers should be made compulsory for entering upon this job While considering qualification of teachers having backelor's degree So, management should consider teachers holding master's degree for secondary and senior scondary schools. If they are considered from primary schools, they should be given incentives or increments and should be given opportunities for further advancement

To conclude, problem of present study itself is an area, which need a thorough evaluation and careful probing, one of the important areas, in which a thorough probing is required, is to study the personality traits, which are best predictors of success in job with ohter variables such as vocational interest Further researches may be carried out to focus on unsolved problem of this study and also to confirm and modify its results

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Art of Healthy and Productive Living: The Concept and the Indian Tradition

JYOTSNA TIWARI*

The National Curriculum Framework for School Education 2000 has recommended a new inter-disciplinary area, Art of Healthy and Productive Living at elementary stage of education, merging Art and Work Education, Health and Physical education. This article analyses the relevance and importance of the subject and teacher's role in achieving its objectives

THE NATIONAL Curriculum Framework for School Education (NCFSE-2000) has introduced the new inter discipline area of learning –Art of Healthy and Productive Living (AHPL) as the third subject at primary stage of school education. Besides AHPL, language (mother tongue) and mathematics up to II standard and environmental sciences from III to V are compulsory subjects. Each of the subjects has certain objectives of teaching and have its learning outcomes. APHL is a subject with a blend of more than one area merging health and physical education, art education and work experience. This is an activity based subject and has been introduced with the objectives to develop aesthetic sensibility and skills of healthy living besides providing a nurturing ground for love for labour, positive social attitudes and moral values to enable the child to be respective to ideas of others with humility and sincerity in thought, word and deed. These will help them develop into better social human beings and dedicated, contributing citizens of the nation (NCFSE-2000).

In the life of an individual, the primary stage of education is of development where the child starts interacting with different people and stays in the school for 6-8 hours each day for at least five days a week. School provides the platform for learning not only the curricular subjects but also play

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* Lecturer in Art Education, Department of Education in Social Sciences and Humanities, NCERT, New Delhi 110016

a significant role in the overall development of child's personality. Thus, dimensions of AHPL have to be imbibed through the activities during the class in such a way that the values associated with the AHPL are reflected in their day-to-day life in and out of school The learning impact upon the children at this stage is long lasting and most of the basic habits developed during this age (6-10 years) remain unchanged throughout the life

Looking at the present day socio-economic scenario it is important that values be taught since the early childhood, which will reflect upon the personality of the child when s/ he grows up as an adolescent and an adult. These values come to the child largely through parentage and education. There has been a deep felt necessity and great concern of the educators that certain traditional values should be imbibed into the subjects and imparted upon the learners. One of the major concerns of the NCFSE-2000 is based upon the aforesaid issues. Introducing the concept of AHPL is a paradigm shift from teaching technique oriented art skills to a more human and practical approach of overall education.

Although there has been an initiative by the NCERT to prepare a handbook for the teachers (for class I- III) of AHPL (NCERT, 2003), there is a lot of scope for the teachers to develop activities within the conducive environment of the school The activities should be developed keeping in mind the socio-economic conditions and cultural and regional variations of the country which is a multi-cultural and multi-lingual society. The economic structure of the society is also multi leveled and makes the education system somewhat complex There is a large variation among the schools, which are either having excessive resources or the ones with very limited resources

In the Indian tradition, the term *Samskar* has been used in multifarious contexts The foundation of a culture (*Samskriti*) depends upon the *Samskar* of the people. *Samskar* comprises of the habits and behavioural attitudes, which are imbibed in the personality. If we inculcate values, which are reflected in the form of good habits in a child, probability is very high that s/he grows into a good human being. The new curricular area of AHPL should be taught to the students in such a way that it inculcates good values or *samskar* among them The teacher (of AHPL) should select activities, which would be able to enhance the quality of life at different stages of growth The years of primary education are of foundation of a child and they should be encouraged for healthy practices, which include cleanliness – keeping the person and surrounding clean, develop creativity of mind and expression as well as communication skills

In the recent times, Indian society has undergone drastic changes and traditional values have diluted along with the structure of families. In this situation, schools become important centers of activities and the teachers' role is instrumental in the mental and physical growth of children. There has been a growing trend among the parents' to send their children to school as early as 3-4 years Another situation, which is peculiar to the urban milieu is where both the parents are working and the children learn more at school. They face lot of pressure and conflicts in what has been taught at school and what they learn at home. In such cases the responsibility of schools and teachers increases (specially while taking AHPL classes) where there is a tremendous scope of giving lessons of values to the children. Value based activities may cultivate good habits including, remaining clean and healthy, appreciate finer aspects of life, respect for all specially elders, love for nature, equal respect for every profession and so on.

Cleanliness or hygiene and regular exercises are necessary for a healthy child These two things take care of the physical aspects and a healthy body nurtures productive thoughts and ideas. Hygiene or cleanliness is a deliberate practice conducted through conscious efforts. The importance of cleanliness and eating habits should be taught to the children from an early stage. The teachers should teach these habits in the classroom in such a way that its effects remain even after the school hours. Children of this age replicate what has been thought to them specially physical movements They should be taught the basic yogic exercises which are simple and help in physical development of children. Since teachers have tremendous impact on children of this stage, the teacher should tell about the nutritious values of different food items which are good for health and growth of children. Children may not be able to understand the structure of food and nutrition, it can be explained to them in simple language giving examples and positive as well as negative effects of food habits Children in turn may start appreciating nutritious and good food at home as well This kind of awareness will bring well being among the children at a larger scale Also, children are sometimes repulsive and become rigid with parents, and the same things taught at the school works out well. Cleanliness has physical, environmental and mental implications, whereas, creative activities among children develop finer sensibilities and skills to perform day to day activities

The teacher should choose activities which are useful and that children can co-relate and practice in their daily life. They may perform these activities either individually or in a group All the three areas of AHPL are related with each other –whatever the child does in AHPL is either for the child as an individual or for the class, school or whole community. The sense of discipline may be developed through AHPL easily, instead of teaching it in an imperative form. While performing an activity, the children can learn discipline, cleanliness, aesthetics, self reliance and attitude to help others. For example, if the teacher is teaching an art activity, all these aspects like how to draw different lines or colour an object may be taught to them In an activity, a straight line to form a shape looks better than broken lines, the children can perform this by making line, during the movements in school as well as outside the school and generally this becomes a habit which they can practice even at the later stages of life as adults

Similarly while drawing forms how they can organise it on a paper neatly and fill the form with color – discipline to colour within the outline teacher's self discipline and coordination between the hand and mind These activities teach the children how to keep the things neatly and in a proper place The activities of AHPL may be largely taken up in groups Working in groups teaches children to help and co-operate with each other. It will also help children to come out of their inhibition, if any.

In AHPL, the children may be taught to practice and develop good habits like not to waste anything including food, paper, stationary items, resources like water, electricity etc. and always use dustbin to dispose off whatever has to be discarded They should be taught about the importance of cleanliness and why they should not waste things. A tendency to protect nature and animals may also be taught through role play and songs, drawing, etc They can also be taught how to speak with their parents, teachers, elders and friends. They should be taught to always speak softly and respectfully without raising their voice In the Indian tradition it has been emphasized that to hurt or offend anyone is the biggest sin that one can commit

These humane values and compassion for fellow human beings are some of the traditional practices or *Samskars*, which needs to be emphasized specially in today's world of material culture. A balance can be maintained between the material culture and traditional values and if the child is well aware and practice the traditional values, it will help him/ her to think rationally and ethically (as an adult)

The teacher of AHPL is expected to posses some of the qualities which will make the subject more interesting and effective. As observed in the report of Kothari Commission (1966), the school atmosphere, the personality and behaviour of the teacher, the facilities provided in the school will have a large say in developing a sense of values... Every teacher, whatever be the subject s/he teaches must necessarily accept this responsibility. The teacher must ensure that in teaching a particular subject and while dealing with the pupils fundamental values such as integrity and social responsibility are brought out, these observations are valid even to day and specially in the teaching of AHPL. Since this subject is not the one which requires instructions like other subjects, rather it needs proper communication with the pupil, the teacher of AHPL should have a very good communication skill and body language and should be very active, specially with the children of this age group. The children of this age group have a very inquisitive mind and they question a lot, their curiosity should be answered properly- their questions should not remain unanswered The AHPL aims to build up the child into a harmonious and complete human being who would be an asset to the family, country and the whole humanity. This rests with how the teacher implements it and approaches the subject.

The subject of AHPL should be dealt very causciously by teachers and without making it a burden, it can be taught beautifully by indicating good values of life alongwith their physical, mental and creative development. This is a concept which has been introduced at a very appropriate time and it should be taken very seriously by the school management, teachers, parents and the community so that it may be passed on to children in the light of today's developments of the society.

Conservation of Kinship Roles Among Rural Boys

A.C. Pachaury*

Learning to live together is a major purpose of education. Harmonious development of an individual clubbed with humane values would serve the above purpose This study attempts to make an enquiry into how children feel about their kinship roles in their family and society. The findings could be of help to teachers to imbibe the values of love and compassion among children in school.

Piaget and his collaborators studied development of human intelligence over a period of seven decades. Hypothetico-deductive level of intellectual functioning concerns with 'utilizing all possible transformations of relations' and is shaped through four invariant hierarchical stages from birth to adolescence. From birth to two-years, the infant exploits environment through action-intelligence Piaget designates use of it to sensori-motor stage During the pre-operational stage (2 to 7 years), the subject utilizes four levels of representational schemata, i.e., object, index; symbol; and sign. They are mediated through parts of the objects, imitation, jake believe play, physical models and pictures, and words, respectively. The child during this phase of cognitive development, does not decenter thought. Since, egocentricism predominates in dealing with the objects/persons, etc. Concrete operational child (7 to 11/12 years) decenters thought process in favour of perspectivism. It can take either cognitive and/or social form. The latter 'is a form of thought that enables the perspective of others to be compared, contrasted, and coordinated' (Volpe, 1975). The cognitive perspectivism deals with what Piaget has designated as conservation task. Once the learner attains logico-mathematical schematization (grouping, ordering, and number conservation; and infralogical schemes) then, it can be employed in a wide range

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* 110-B, Sushmita, Sector-A, Sarvdharm, Bhopal 462042

of transacting contexts Therefore, it seems appropriate to accept interrelationship between perspective on role taking and concete operational thinking Researches have shown that these two developments are acquired during six to twelve years of age (Feffer, 1970, Feffer and Gourevitch, 1960; Feffer and sucholiff, 1966; Flapman 1968, Flavell, 1968, 1973, Kohlberg et. al , 1968; Selman, 1971a, b, Smit, 1973; and Wolfe, 1963, all cited in Volpe, 1975)

In a rural disadvantaged family, the child to attend to a variety of activities like tending of siblings, ranching, and home/farm related jobs. Conservation of kinship roles, it is asserted, would augment child's level of performance and, therefore, create better adaptability by reducing interpersonal stress situations Lazarus (1971) also emphasized development of reciprocal role behaviours because they are 'best suited to cope with the complex problem of family living'

It has been evidenced that the rural disadvantaged Ss manifest delay of three/four years in the attainment of Piagetian tasks that hinge on the use of logico-mathematical schemes (Pachauiry, 1993, 1995, 1996, 1997, 1998, 1999, 2000a, b, and c)

Concerns of the Study

On the basis of the above observations, it was felt to explore the status of conservation of kinship roles among the rural boys. Four major concerns were addressed through this study.

(a) What is the level of conservation of kinship roles among the third, fourth, and fifth grade rural boys?

(b) Does the grade level of these Ss affect conservation of kinship roles?

(c) Does task artifact affect conservation of kinship roles among the samples grades?

(d) Does social stratification of the sampled Ss affect conservation of kinship roles?

Sample

47 rural boys formed the sample. They came from III (11), IV (14) and V (22) classes of a boy's government school (kesla Block, Dist. Hoshangabad, Madhya Pradesh) Their mean ages were 9+, 10+, and 11+, respectively

Tool Used

The five tasks employed in data collection were patterned after Siegel et. al. (Fink, 1975) that measured social perspectivism related to kinship roles of father, mother, sister, brother, and grandmother were created.

(a) Father· Your father has become Sarpanch of the Village Does he remain your father? Why?

(b) Moher: Your mother has become a school teacher Does she remain your mother? Why?

(c) Sister: Your sister is married Does she remain your sister? Why?

(d) Brother. Your elder brother starts living in Bhopal does he remain your brother? Why?

(e) Grandmother· My grandmother died two years back Does she remain my grandmother? Why?

Scoring

A subject who conserved the kinship role and gave a reasonable justification, received a score of one All others were marked zero scores

Data Collection

Data were collected individually by the experimenter.

Results

I Level of Development of Social Roles

The accompanying table provides number and per cent of the sampled Ss who conserved kinship role for all the five administered tasks

Grades

Task	III	IV	V
1	10 (90 90)	14 (100)	21(95.45)
2	9 (81 81)	14 (100)	21(95.45)
3	9 (81 81)	11 (78 57)	21(95.45)
4	8 (72 72)	13 (92.85)	21(95.45)
5.	6 (54 54)	7 (50 00)	9 (40.90)

Third standard boys of this study filed to attain 75% level of performance (as judged by Piagetians on any conservation task) in conserving kinship roles of brother living in a city and death of experimenter's grandmother. The percentages for these tsks had been 73 and 55, respectively However, these Ss very well conserved kinship roles of father, mother and sister (82% for each of them). Fourth standard boys, except for conserving kinship role of grandmother, on the other four tasks, they performed very well (percentages being 100, 100, 79 and 93, respectively) This is also true for the fifth grade boys. However, they rather showed a regression of 10% in attaining conservation of kinship role of grandmother from the other two junior peer groups. About 4% regression was also manifested by them on taks one and two that are related to conservation roles of parents

II. Across grade differences

There does not exist any significant difference among the sampled boys of third through fifth grades in conserving kinship roles related to parents, siblings and grandmother (All the paired comparisons were insignificant at 0.05 level of confidence (tested through pooled frequency method) Therefore, the frequencies (%) were merged for each task They came to 45 (95.74%), 44 (93 61%), 41 (87 23%), 42 (89.36) and 22 (46 80%) Lowest percentage for the entire sample had been 47 for the conservation of grandmother's role. Next higher percentage had been for sister's role, i e. 87 Therefore, 't' test was run for determining significant difference between them. The yielded value of 't' had been 4.20. It is significant (p<0 05). Hence, it is infered that the sampled boys of grades III to V performed significantly better on conservation of sister's role in comparison to the grandmother's role. Since, the other three percentages for brother, mother and father had been higher, therefore, it is obvious that there exist significant differences between conservation of kinship roles of brother, mother, and father by the sampled boys (III/V) in comparison to the grandmother's role.

III Across ethnic differences

The table given below provides percentages of the Ss on the basis of their ethnic backgrounds, who conserved different kinship roles.

(a) Conservation of father's role. ST (Gond/Korku) Ss and OBC (Teli, etc.) Ss conserved father's kinship role enblock, i e., 100% respectively Against this percentage, SC (Passi, Harijan and Kurmi), and general category Ss registered a fall of 8%, respectively

(b) Conservation of mother's role· ST and OBC Ss showed a fall of 11% and 7% on the conservation of mother's role in comparison to father's role. SC Ss showed 8% better performance on mother's role

(c) Conservation of sibling's role: Much variation had been encountered on this task across the sampled Ss ST boys manifested lowest level of performance on it (33.33%) in comparison to not only on other tasks but as well among the other three categories of the peers. Next higher percentage was reflected by the OBC Ss (42.87)

About 16% rise in conservation of grandmother's role over the OBC peers had been registered by the SC Ss

Tasks		1	2	3	4	5
ST	Gonds (8)	8	7	7	7	2
	Korku (1)	1	1	1	1	1
	n = 9	100	88 88	88 88	88 88	33 33
SC	Passi (2)	1	1	1	1	–
	Harijan (4)	4	4	4	4	2
	Kurmi (6)	6	6	6	6	5
	N = 12	91.66	91 66	91.66	91 66	58 33
OBC	Teli (8)	8	7	6	6	3
	Yadav (2)	2	2	1	2	1
	Ahir (2)	2	2	2	1	–
	Kewat (1)	1	1	1	1	
	Mali (1)	1	1	1	1	1
	n = 14	100	9 285	78 57	78 57	42 85
General	Brahmin (8)	8	8	7	8	4
	Kayastha (1)	–	1	1	1	–
	Gupta (1)	1	1	1	1	1
	Rathod (2)	2	2	2	2	1
	n = 12	01 66	100	91 66	100	50
		45(95 45)	44(93.61)	41(87.23)	42(89 36)	22(46 80)

(58.33%). This figure also happens to be highest level of performance registered by the four categories of the boys. General category Ss showed intermediary level of performance (50%) between the peers of OBC and SC.

Lowest (33.33%) and highest (58.33%) percentage difference resulted in 25%. Therefore, its significance was tested ('t' test). It yielded a value of 1.13 only. Hence, it proved to be insignificant ($p > 0.05$). Other two percentage differences (42.85% and 50%) too were insignificant. The four categories of the rural boys, therefore, formed a homogeneous group in respect of their grandmother's kinship role related to experimenter's context. On the other four tasks, the percentage differences were even less than 25 for any paired comparison. Hence, they too were insignificant differences.

Major conclusions of this study

(a) Kinship roles were conserved to the extent of 73% to 100%. On logico-mathematical schemes 75% level of performance had not been shown by the Indian Ss (children, adolescents/ adults).

(b) The sampled boys of III through V grades form a homogeneous group in respect of conservation of kinship roles of parents, siblings and grandmother.

(c) Test artifact of conservation of kinship role of grandmother in experimenter's context affected their performance. For partents/siblings this effect was silent.

(d) Social stratification does not affect conservation of kinship roles of parents, siblings and grandmother.

Discussion

Except for the conservation of kinship role of grandmother in the context of the experimenter, all the sampled disadvantaged rural boys of Kesla block studying in III through V grades succeeded in conserving kinship roles of parents (father/mother) and siblings (brother/sister). Conservation of grandmonther's role failed to evoke right response in 44 to 59% of these boys. Against 75% Piagetian criterion, then, this task shows delay of atleast 2/3 years. In cognitive perpectivism (conservation, etc.), weaker sectionSs' had manifested almost similar kind and magnitude of delays. Most probable reason for this to have happened lies in the task artifacts (Pachaury, 1997, 2000). Conservation of kinship role of grandmother had to be anticipated in the experimenter's context. It involes escalation of thought process in a temporal perspective. The other tasks were tagged to direct interpersonal parental/sibling relationships. Consequently, conservation of grandmother's role had to be tackled through second-order transformation instead of a direct one. This added difficulty was not negotiated by 50% of the Ss.

Paiget (1965) considers conservation process to be 'a necessary condition of all rational activity'. This, therefore, forms it as an important link in the development of cognititve as well as social perspectivism. Specifically, he asserted, 1. 'schemata of objects and of persons exist constantly in the cognitive reactions of the child those schemata are always bother affective and cognitive at the same time 2 the schemata related to persons have both a cognitive and affective aspect since persons are the centres of activity' Therefore, for the sampled Ss, task familiarity/context helped them to conserve kinship roles of parents/siblings much better than the remotely anticipated experimenter's conservation of grandmother's social role

Educational implications

The fact that even third-grade disadvantaged rural boys reflected social perspectivism very well, it then, has implications for the development of their cognitive perspectivism that banks on abilities like conservation and allied mental schemes of categorising/relating, and topological, projective and Euclidean by the concrete operational child. Research evidence also suggests that these logico-mathematical structures predit reading, arithmetic/science achievements of first two years of schooling very well (cited in Pachaury, 1996) It is, therefore, asserted, the school readiness programmes be developed on the basis of social perspectivism that governs ethnic contextuality of the learners

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Book Review

Art of Healthy and Productive Living: A Handbook for Teachers for Classes I, II and III. Kiran Devendra, Sandhya Paranjpey, Yogesh Kumar, Sharda Kumari and Rajendra Kapoor. National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi 110016 April 2003, ppviii + 140 price Rs. 55 00

The book under review is a handbook for teachers of primary classes I, II and III for teaching the newly introduced inter-disciplinary subject area, Art of Healthy and Productive Living. It serves as a guideline for teachers on how to deliver this new subject area recommended by the *National Curriculum Framework for School Education 2000* (NCFSE). This newly introduced subject integrates the major concerns of health and physical education, art education and work education. It would be relevant to quote from the NCFSE – 2000 the objectives of introducing this new subject area of learning in the primary stage.

The need for introducing an interdisciplinary area of learning integrating the major concerns of Health and Physical Education, Art Education and Work Education has assumed greater significance. Despite clear allocation for time for these components in the earlier curriculum documents, little attention in reality has been paid to these. There have been logistic, conceptual and other difficulties experienced by the teachers and implementing agencies which contribute enormously towards the all round development of the personality of children The system seems to have experienced difficulties to be responsive to the developmental needs of children. Another major factor leading to the half-hearted availability of proper motivation and evaluation procedures among teachers. Yet another bottleneck seems to be their presentation in a fragmented manner As such, the proposed subject under the title Art of Healthy and Productive Living is being recommended initially for primary classes which can be subsequently extended to upper primary classes

The main objective of Art of Healthy and Productive Living is to develop aesthetic sensibilities and skills of healthful living besides providing a nurturing ground for love for labour, positive social attitudes and moral values so as to enable the child to be receptive to ideas of other with humility and sincerity in thought, word and deed. This will provide children with opportunities for their development into social human being and dedicated and contributing citizens for the society and the nation Love for mankind and helping the needy would germinate at this stage and its culmination would be in terms of attainment of selfless service –**Seva** *(Page 67)*

The handbook consists of eight chapters with a foreword by Professor J S Rajput and a two page gist of the book titled 'About the Handbook'. As stated in the foreword and in 'About the Handbook', the book is to provide guidelines and guidance to teachers of primary classes to design activities to effectively teach the new area of learning, Art of Healthy and Productive Living which is a merger of three subjects in the previous curriculum

The first chapter of the book introduces the objectives of the subject area and the expected learning outcomes Some of the objectives worth mentioning are *to develop proper and regular habits and attitudes; to meet the natural needs of the body; know and understand the functions of the different parts/organs of the body and develop habits to keep them clean and healthy, develop awareness and sensitivity towards the immediate environment and understand the inter-dependence between humans and the environment; development respect for manual work, dignity of labour and hardwork; develop values such as co-operation, tolerance, caring and sharing, develop physical, mental and emotional well-being through yoga and games, nurture the inherent abilities of self-expression and creativity through visual and performing arts and to enable children to appreciate and develop aesthetic sensitivity towards these arts* The objectives are listed class wise. Every objective listed above is indicated with the learning outcomes for Classes I and II together and separately for Class III As the subject is inter-disciplinary and requires time, the activities for classes I and II may be conducted together

The chapter mentions more than once that there will be no textbook for this subject and prepares teachers to design activities and strategies to conduct them to redress the objectives It says, (a) Those activities which can be taken up by all the students of a school, like the morning assembly, prior to starting the classes All the children can sit together The students can conduct the proceedings by starting with a prayer, news reading, giving other important information and then concluding with the national anthem; (b) Other activities which can be conducted depending on the availability of local materials, local rituals, traditions and culture (Page 3)

The second chapter explains and explores 'the Challenges' that a teacher has to face while transacting the AHPL. Some of the challenges which find a mention include, multi grade and multi level classes, over crowded classes, and shift system in schools and the issues that a teacher would like to answer such as curriculum load, shortage of time, lack of space, lack of material, discipline and lack of sensitivity of the community

A comparison of (typical) classrooms in two different Indian primary schools (pages 15 and 16) with a purpose to show that discipline is not just being silent in the classroom and being fearful of teachers, it is a quality that comes from within the child being practiced and imbibed by all in a harmonious way would serve the purpose to orient the teachers on why children need to be treated with dignity

The third chapter lists out some of the 'Misconceptions' about AHPL and gives ways to clear them out to make the activities live. As the book keeps informing that this is a new area of learning and inter-disciplinary subject which is a merger of Art and Health Education and there is no textbook separately for teaching this subject, this chapter takes the first misconception, *what can I teach when there is no textbook?* This 'no textbook issue' is addressed by asking teachers to put question *what to teach, how to teach and by discussing with teachers.* The second misconception dealt is blaming children for every mistakes, especially those who do not perform well. *"They are not going to change"* comment from teacher would need to change, it concludes It puts it rightly *"we all make mistakes and meet failures yet we expect our students to be hundred per cent perfect. If a mischievous boy could not do anything in the classroom, then how come that some naughty boy invented the steam engine"* Other misconceptions explained are about the opinion of teachers on the academic support by the community to school (you made the contribution, we will take care of education), if no instruction, why is a teacher or classroom (without instruction what kind of teachers?) Teachers' misconception about the students are listed, Some of the common misconceptions described are: children's knowledge and ability to comprehend, boys and girls preferences for certain subjects, ability and skills of different castes and communities, ability of children coming from different social and regional backgrounds, ability of physically and mentally challenged children, impressions of children based on their marks/grades.

This chapter would definitely serve as an eye opener for teachers to understand why the subject area has to be integrated into all the subjects Objectivity of the teacher, accepting the child as the constructor of knowledge, learning from immediate environment, education for life and learning for life are the hallmarks of the chapter.

The next chapter 'Understanding the Child' discusses the psycho-pedagogical aspects of the child in primary school based on the two major principles of child's growth and development. *Every child is unique and every age group has some special features* Developmental characteristics in the 6-7 , 8-9 and 10-11 years age groups are listed and discussed to create an awareness among teachers about the developmental characteristics of children in the primary school stage. The individual differences of children which include emotional differences, personal interest, physical needs, emotional needs, differences in behaviour are illustrated with concrete examples Every aspect mentioned above is aimed at making an emphasis for child-centered activity method

The book right from chapter one, has been making all out efforts to convince the teachers that the subject area of Art of Healthy and Productive Living (AHPL) needs to be delivered as an integral part of every subject or learning experience that children learn and experience in and out of school It would also lead them to explore environment as well as every happening or activity of life to learn to be a learner of every thing to lead a meaningful life. The chapter five of the book, 'Methods of Providing Experiences' presents the various and varied ways through which the interdisciplinary area could be delivered effectively in and out side the classroom and how children could learn through 'in and out of school' experiences The chapter begins by saying, *"In the primary school what are the existing methods of providing learning experiences and what should be practiced depend on the following What are our beliefs about knowledge? How do we think children learn behavioural patterns? What is our belief of value and self-respect, like every person for his / her self sufficiency needs education ?*

We must think of processes in the educational system which will bring about modification in the behaviour of students at the same time keeping intact their individual differences (p 30)

While presenting the methods by which the subject area is to be delivered, the authors give details of methods and strategies to design and deliver the activity for enriching the learning experiences of children. The methods listed and explored include, methods of discovery, project method, question and answer method, method of self-teaching, story-telling, dramatization techniques, movies, traveling trips and excursion, painting, music, poems and songs. This chapter would very well be a resource mine for teachers to develop, design and conduct activities to deliver the subject area and realise its aims and objectives Every method mentioned above has been presented exhaustively to support teachers to conduct activities for enhanced learning experiences

A very short chapter on, "We and the Community" attempts to provide teachers how the community can be brought into school activities and to support the management of the conduct of activities relating to AHPL The chapter makes a strong statement that *"even uneducated parents can teach many things which they are good at. The elders in the villages can tell the children about the history of the place.. . there can be no better source of information than these people (p. 41)* The book further presents the ways through which community can be involved in the teaching learning process and management of AHPL activity in schools :

- *When you want to take the children on a trip but find it difficult to manage along, you can always take a willing parent/parents to assist you*
- *You may not be familiar with some of the trees and plants in your environment Do not hesitate to ask the children if their parents can help in knowing about them*
- *You have come to know through some source that the parent or relation of a particular child is a yoga expert. You can always seek help from them in conducting yogic exercises.*
- *While organising a fair/mela, social or national function, you can receive tremendous amount of help in different ways from the parents*

The last part of the chapter argues in favour of parents and community involvement in value education of children in school It adds we, as teachers must be willing and mentally prepared to involve both the parents and community

The chapter 7, which is lengthier running to 91 pages, presents strategies for planning and organising activities of AHPL This chapter covers planning management and organisation of activities. Presented with illustrations the chapter discusses planning, place of conducting the activities and the actual ways of conducting of activities. It says a careful selection of activities, proper method of delivering the activity, materials required for the activity, suitable place of conducting the activity, time duration required for the activity, persons to be involved in the conduct of the activity are presented through suggestions, observations and by putting questions to teachers to get themselves cleared. The expected outcomes listed in pages 50-51 to make the teachers aware of what should be expected of every activity by emphasising the teachers should consider the expected outcomes before conducting any activity. This chapter also provides exemplar core and optional activities, which would serve as readymade source (for teachers), which could be used as it is or used as a source for many more activities. This section of activities is the most useful part for the teachers as most of the teachers would be perplexed or rather even confused to design activities giving many reasons like constraints of time, space, etc. Small poems, stories, yoga, exercises and riddles are presented as activities for children. The activity number 18, trips and excursions to places of historical, cultural, environmental importance gives source of information for conducting such trips and excursions. The activity (p. 132 & 135) presents the objectives of the activities planning and organisation of the activity, care and cautions to be taken what follow up activity should follow as a learning experience.

The final chapter on evaluation, after mentioning the need for monitoring and evaluation of AHPL, makes a serious argument for individual as well as group assessment of children and it also gives tips for teachers how a child should be evaluated and encouraged to be an active participant in the activities (P. 137). A specimen evaluation sheet given on the last page of the chapter would be of help for teachers to evaluate children.

The handbook as stated in the foreword and "About the Book" aims to serve as a resource and support material to help teachers for the implementation of the inter-disciplinary area of AHPL. Since there is no textbook prescribed for this subject area and teachers have to integrate these subject areas into the other subjects i.e. language, environmental studies and mathematics, the book attains greater importance and teachers need guidance and guidelines for understanding the aims and objectives of the subject and design activities for children. The book deserves high appreciation in realising the objectives of the *National Curriculum Framework 2000* in the subject area of Art of Health, and Productive Living.

The book has been presented in two colours but can not claim to have achieved the aim of presenting impressive illustrations as the illustrations given in colour could not present the figures well. Some of the illustrations are not clear and are in fading shades. One can sincerely hope that the next edition of the book would take care of them.

The chapter on activities is extensive. Teachers could use them as readymade material for conducting activities in the classroom Riddles, songs, games are also given. Almost all of them are the transliterations of Hindi songs, riddles, etc The riddles and songs could have also been from other languages of the country so that teachers from other parts of the country could use it as the AHPL advocates for using locally available source and material for effective delivery of the subject

The National Curriculum Framework for School Education 2000 (NCFSE) while recommending the new area of AHPL has indicated clearly the reasons for the subject area of SUPW, Health and Physical Education, Art and work education, not assuming greater significance in the earlier curriculum documents as half hearted availability of proper motivation of teachers and evaluation procedures of the area in the previous curriculum documents. The book makes an earnest attempt to motivate teachers by making them aware of the new subject area, AHPL and giving guidance to make the subject realistic and live in schools The book needs to be disseminated widely to teachers, schools, teacher education institutions as it would serve as a good companion to the above agents of education to produce healthy citizens who would know the art of healthy and productive living

R. Meganathan

All India Competition for School Teachers and Teacher Educators on Innovative Practices and Experiments

National Council of Educational Research and Training (NCERT) invites innovative papers from school teachers and teacher educators The paper can relate to solving classroom problems, improving methodology of teaching, organizing curricular activities and effective utilisation of institutional resources, etc If you have conducted any such experiment or practice, prepare a paper in detail and send three copies of the same along with its summary to the Principal, Regional Institute of Education of your region

Eligibility for Participation:

1. Teachers Educators working in Primary Teacher Training Institutions and District Institutes of Education and Training (DIETs), in Secondary Colleges of Teacher Education (CTEs) Principals of Teacher Training Institutions, Institutes of Advanced Studies in Education (IASEs); Teacher Educators working in University Departments of Education, Academic Staff members in State Councils of Educational Research and Training (SCERTs), State Institutes of Education (SIEs) and Retired Faculty members of Teacher Education Institutions can participate in the scheme
2 Teachers working in Pre-Primary Primary, Secondary, and Senior Secondary Schools, Special Education Schools, Head Teachers, Principals, Inspectors of Schools, Education Officers dealing with School Education and Retired School Teachers can participate in the scheme Information Bulletin containing all the details of competitions can be had **free of cost** from any of the following addresses.

(i) Head, Department of Teacher Education and Extension, National Council of Educational Research and Training, Sri Aurobindo Marg, **New Delhi**-110016, (ii) Principal, Regional Institute of Education, **Ajmer**-305004 Rejasthan, (iii) Principal, Regional Institute of Education, **Bhopal**-462013 Madhya Pradesh, (iv) Principal, Regional Institute of Education, **Mysore**-570006, Karnataka, (v) Principal, Regional Institute of Education, **Bhuabeshwar**-751007, Orissa, (vi) Officer on Special Duty North East Regional Institute of Education, Jowai Road, Laitumkhrah, **Shillong**-793003, Meghalaya, (vii) State Council of Educational Research and Training (SCERT)/State Institute of Education (SIE) in your own state.

The last date for the receipt of paper is 30th November, 2003

*** Detailed particulars are also available at our website at** www.ncert nic in

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Gandhiji's Talisman

I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test:

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny? In other words, will it lead to Swaraj for the hungry and spiritually starving millions?

Then you will find your doubts and your self melting away.

mkGandhi

Editorial

The Education for All (EFA) Global Monitoring Report (2002) of the UNESCO, a meticulously conducted assessment of the progress made by every region and country towards the goals of EFA, has many messages to convey to every country The report has presented the state of the countries, which avowed to realise the six goals of EFA at World Education Forum in Dakar, Senegal in 2000 Besides the indicators of Net Enrolment Ratio (NER), Gross Enrolment Ratio (GER), Gender Parity Index (GPI), the reports' core has made an assessment of the three goals viz. Universal Primary Education in terms of NER, GER, Adult literacy and gender parity Leaving the countries, which have achieved the goals, the Report has placed the countries in the quadrants based on the indicators. Over all, there are 83 countries in the category of high chance of achieving all three goals, 43 countries will miss atleast one goal and 28 countries are at serious risk of not achieving any of the three goals

The EFA Global Monitoring Report, while regretting that the world is not on track on the march towards the goals of EFA, which the countries avowed to realise by 2015, has very serious message for India Regrettably enough India is one among the 28 countries, which are at serious risk of not achieving any of the three goals. The Report has made mentions about India's concerted efforts since independence to provide compulsory education to all her children through the constitutional commitment, making education a fundamental right and the mission mode programme of *Sarva Shiksha Abhiyan (SSA)*. The report makes it clear when it quotes (Govinda (2002) EFA in India), *"Change has to be substantial and progress much faster if the aspiration of the people as well as the newly made commitment of pursuing quality basic education as a fundamental right of all citizens are to be met. This will demand a massive movement through political and social mobilisation to create a common platform with the sole agenda 'Quality Educational for All' as envisaged by Sarva Shiksha Abhiyan as well as the Dakar EFA Framework of Action."*

At this point of time we should not forget that India has set 2010 as the target year to achieve the goals by the mission mode programme of SSA instead of 2015 as envisaged by the Dakar *EFA Framework of Action*. The undeniable fact that the role the teachers in the primary school play in retaining children in school and mobilising the community to be committed to achieving the goals of EFA would pave way for India to make progress towards achieving the goals. Adopting the strategies that would make the classroom an interesting place for children while learning would lead to increased survival and completion rates of children in school The hope, rested in the teachers of primary schools and those of teacher education institutions involved in the mission of SSA, could be realised with their commitment. This issue of the Primary Teacher brings a review of the EFA Global Monitoring Report, which has highlighted the global status and the concerns need to be addressed by every country.

This issue also finds a new feature, Profile, which is intended to depict the life, contribution and educational philosophy of educators, experimenters in the field of education. As a mark of tribute to the humble teacher who rose to become the president of the country, the feature begins with the profile of Dr. Sarvepalli Radhakrishnan The other themes of the issue address the environment education at primary stage, teacher education for quality school education, strategies for effective classroom processes, gender difference in the perception of parental treatment of children, impact of the radio programme, *Gyankalash* in Himachal Pradesh and cooperative learning for imbibing scientific spirits. These papers and articles are the result of the benefit of the experience of the authors and could serve as a tool for the teachers, teacher educators to enrich the experiences of children in the classroom.

R. Meganathan
Academic Editor

Role of Geography in Environmental Education

Sarfaraz Alam*

Understanding of the environment in its totality (both natural and social), and their interactive processes, the environmental problems and the ways and means to preserve the environment is one of the objectives of school education as envisaged by the National Curriculum Framework for School Education-2000 This paper presents the place of geography in environmental education The methods and strategies suggested by the author would enrich the classroom experiences of children.

Introduction

Environmental education is globally emerging as an integral part of the school curriculum The National Curriculum Framework for School Education (NCFSE) 2000 also recognises evironmental education as one of the main thrust areas in the school education system of the country. The document proposes that the school curriculum should promote an understanding of the environment in its totality both natural and social, and their interactive processes, the environmental problems and the ways and means to preserve the environment. To this end, the NCFSE recommends that the school curriculum should focus on enabling learners to acquire knowledge, develop understanding and inculcate skills, positive attitudes, values and habits. As a matter of fact, these recommendations may be described as an expansion of the Fundamental Duties of citizens specified in Chapter IV A of the Constitution of India

It is widely recognised that geography has long-standing concerns with the natural environment and environmental issues, and geographers have enormously contributed towards an understanding of the processes and

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* Lecturer, Department of Geography, Gopeshwar College, Hathwa, J P University, Chapra, Bihar.

patterns of man-standing concerns with the natural environment and environmental issues, and geographers have enormously contributed towards an understanding of the processes and patterns of man-environment relationships in various ways As a matter of fact, from its inception geography has always been conceptualised as some kind of an "environmental science"—a discipline enganged in locating, exploring, describing, and analyzing the "environs" and contents of places occupied by different communities on the earth surface. The aim of this paper is to emphasise the role of geography in achieving the objectives of environmental education.

What is Environmental Education?

Our knowledge and understanding about what constitutes an effective environmental education commence with two ground breaking documents of the field the Belgrade Charter (1976) and the Tbilisi Declaration (1978) The Belgrade Charter provides a widely accepted goal statement for environmental education:

> *Environmental education is a process aimed at developing a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work invidldually and collectively towards solutions of current problems and the prevention of new ones.*

Two years later, the world's first intergovernmental conference on environmental education adopted the Tbilisi Declaration This decalration built on the Belgrade Charter and established three broad objectives for environmental education These objectives provide the foundation for much of what has been done in the field of environmental education since the Tbilisi Declaration:

- to foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas,
- to provide every person with opportunity to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment; and
- to create new patterns of behaviour for individuals, groups and society as a whole towards the environment.

As the field of environmental education has evolved over the years, these principles have been researched, evaluated, reexamined, and expanded They still form the frame of reference for subsequent debates on environmental education and are by and large taken as the basic guidelines for environmental education in most countries of the world.

Since the Tbilisi Declaration, such international endavours as the Brundtland Commission (1987), the United Nations Conference on Environment and Development in Rio de Janeiro (1992), the Thessaloniki Declaration (1997), and the Johannesburg Conference (2002) have also influenced our understanding of environment education. As a result, the field of environmental education has expanded considerably to incorporate social, economic, political, and cultural issues as well

Thus, broadly speaking, environmental education is rooted in the belief that humans can live compatibly with nature and act equitably towards each other Another fundemental belief is that people can make informed decisions on issues that concern future generations In short, environmental education aims at fundamental changes in the way people interact with others and the environment.

Why Environmental Education?

Human beings with their decisions and activities have caused irreversible transformation in the natural environment Such changes include land degradation,atmospheric pollution, water pollution and biosphere transformation on scales ranging from local to global. These changes have, in turn, adversely affected humans' economic activities, social and cultural activities, physical well-being, including health and comfort, and psychological well-being, including aesthetic appreciation One of the reasons for these environmental problems is the prevailing ignorance among people about the environment and environmental problems. People lack ecological and environmental values and their attitude towards environmental issues are either negative or at best neutral. Their commitment to preserve the environment is poor and the level of motivation is very low. People are not ecologically sensitive when it comes to their interaction with the natural environment Consequently, the recent emphasis on environmental education as an integral part of the school curriculum to promote awareness and understanding of the environment among learners may be described as a natural corollary of the growing environmental concerns at all geopgraphical scales—from local to the global.

Geography in Environmental Education

In 1968, a joint inquiry by the International Bureau of Education (IBE) and UNESCO noted that the study of environment is an essential aspect of almost every subject and ranked geography first in terms of its contribution What makes geography such a special discipline to promote environmental education in schools? The answer lies in its special characteristics, its breadth of study, its span of approaches, tools and techniques, its multidisciplinary and integrative nature, and its traditional interests in the management of people-environment interrelaltionships

The Scope of Geographical Study

The study of the earth concerns numerous disciplines. For example, physical sciences are concerned with the physical features of the earth, biosciences are concerned with the flora and fauna, while social sciences are concerned with human activities on the earth However, the scopes of these disciplines are very limited. In contrast, the scope of geograhy is very broad Goegraphical inquiry covers all phenomena—physical, biotic and human, found in combination on the surface of the earth. To the geographer, it is the interrelationships of all the phenomena— physical, biological, and human— that is important.

Geographical Approaches

Geography approaches a subject matter in any of the following three ways—systematic, ecological and regional However, the choice of the approach depends on the nature of the problem being studies

Systematic Approach. In this approach, geographers take one or a few aspects of natural or cultural features and study their varying performance over a predefined geograpghical space. The size of the chosen geographical space may vary from global to local.

Ecological Approach: This approach places emphasis on man-environment relations. Here the stress is on the interrelationships of phenomena, the links between aspects of the natural environment of a particular area and the human polulation occupying or modifying it. Geographers shift their emphasis from spatial variations between areas (these may be thought of as horizontal bonds) to vertical bonds within a bounded geographic area. It is worth noting that the relationships may be two-way (i e. the impact of people on the environment, as well as of the environment on people) and that the bounded area may be anything from the globe itself to a very small locality

Regional Approach· Here, appropriate spatial segments of the earth's surface, termed as regions, are identified, their internal (intra-regional) morphology and ecological linkages traced, and their external relations (extraregional) established.

Tools and Techniques

Geographical tools and techniques consist primarily of maps, graphs, diagrams, aerial and other photographs and satellite produced images. In addition, geographers also use statistical and mathematical tools and techniques quite extensively. These tools and techniques are useful in compiling, organising and representing information about various aspects of the earth's surface. The study and practice of geography help learners to master these tools and techniques and comprehend various environmental issues.

Interdisciplinary Subject

Geography can be favourably considered as the foundation of the emerging science of the environment, for the discipline is both integrative and multidisciplinary in nature. It integrates the various elements of man's surroundings—physical, biotic, and cultural—to understand the interdependence and interaction among them. Geography also builds an interface between the natural and social sciences. Geographical questions may require reference to the findings of other disciplines including geology, biology, history, sociology, politics and economics.

Traditional Training Advantage in Poeple Environment Relationships

By nature geography is environmentally oriented, since the understanding of the complex relationships between people and their environments has always been an important field of geographical inquiry In view of the fact that geography in primary schools has been made an integral part of social studies, its value in imparting environmental education is bound to increase. This is because of the fact that no other social science discipline gives importance to environmental issues in the way as geography does In other words, no other single discipline, whether natural and social sciences or humanities, can cover as much ground as geography in its treatment of the various aspects of people's relationships with their environment—both natural and man-made In particular, geographers are concerned with the following aspects of the people-environment relationship.

- How do people depend on the natural environment?
- How does environment provide opportunities for the people?
- How does environment constrains human activities?
- How do human actions modify the natural environment?
- What are the consequences of human modification of the physical environment?
- What are human responses to changes in natural environment?

From the above discussion it is abundantly clear that geography has a decisive advantage over other disciplines in handling environmental education in schools. Broadly speaking, the role of geography in promoting environmental education in schools can be summarised as follows

Knowledge about the Environment

Knowledge about the environment refers to the acquisition and understanding of information about environmental facts, concepts, generalisation and theories. In particular the study of geography helps to develop an understanding of:

- major natural systems of the earth (geomorphic, soil, climatic, hydrological, and biotic) in order to understand the interaction within and between systems;
- human systems of the earth (agricultural, industrial and service systems, settlement systems, transport and trade systems, energy and societal systems, etc.);
- similarities and differences among different geographical regions;
- diversity of people and society on the earth,
- human adaptation to different biophysical habitats;
- different kinds of damages caused by both natural as well as human decisions and activities; and
- impact of environmental degradation on the well being of people.

Environmental Skills

The study of geography equips students with certain abilities that are helpful in managing and improving the quality of the environment. These are:

- *Identification of Issues:* Geography is a way of looking at things. These are geographical dimensions in all the environmental problems being faced by human beings. The study of geography helps learners to identify different environmental problems whose geographical patterns vary from place to place
- *Collection of Informatiom:* Fieldwork is a very important skill in geography. It is essential for learners to face environment face to face—a confrontation without which the much needed sensibility about and concern for the environment cannot begin. Direct observation of environmental features is an integral part of environmental education. But it requires training to make such observations intelligently. The study of geography helps build habits and provides necessary training for the systematic observation of natural and cultural patterns on the earth's surface, which in turn lead to finer appreciation of both the natural and cultural landscapes.
- *Structuring, Processing, Interpreting and Evaluating Information:* Environmental problems occur at different geographical scales—from local to the global. Study of geography assists in identifying the area spread of different types of environmental problems. Information collected through fieldwork and other means are structured and processed by means of various geographical tools and techniques mentioned earlier. They are then objectively interpreted and evaluated to understand their geographical patterns
- *Development of Generalisations:* No two environmental regions on the earth's surface are the same. The study of geography fosters an appreciation of similarities and dissimilarities between one region and another in the nature and extent of the problems under study
- *Making of Judgements and Decisions to solve problems.* After the nature and extent of the problem is known, geographers make rational judgements and take decisions to solve the problems in the greater interests of human beings.

Environmental Values

One cannot isolate moral and ethical issues from environmental education. Values in environmental education imply values ralating to attitudes and behaviour with regard to man's relations with the natural environment. Geography education contributes to the development of environmental ethics, which changes learners' attitudes towards the environment by:

- increasing their interests in the surrounding environment and in the variety of human and natural patterns and processes on the earth's surface;

- encouraging them to appreciate the beauty of the natural world on the one hand, and of the different living conditions of people on the other,
- increasing their concern for the quality and planning of the environment and human habitat for future generations,
- increasing their dedication to seek solutions of environmental and related problems from local to the global scale;
- generating awareness of the importance of cooperation with other people to solve problems on earth,
- promoting respect for others' opinions.

Commitment to Safeguard the Environment

It is a universally known fact that the earth is the only home that humans know of Even more importantly, this the collective home of all people—people of all races, religions and regions. All human beings are completely dependent on the earth However, the health of earth has become frail due to human activities. As a resuslt the misery of humans has also increased In other words, the study of geography teaches us that the well-being or survival of people is dependent on the survival or well-being of the natural environment. This knowledge provides a strong incentive for humans to cooperate for the protection and preservation of the natural environment. In this way, geography education enables learners to learn how to make reasoned decisions, anticipate the consequences of their choices, and assume responsibility for the outcome of their choices about the use of the natural environment In other words, education in geography helps promote a sense of responsibility among learners towards the maintenance and improvement of the environment

Increasing the Levels of Motivations

How can the study of geography enhance our commitment to conserve the natural environment? Knowledge of geography creates a concern among learners for the quality of life in local, national and global ecosystems, which in turn motivates them to participate in solving these problems. Ideally speaking, environmental education in geography must be set into a process of lifelong learning. There should be inseparable and seamless connection between the formal educational context and the day-to-day life of a person in the economic, political, social and religious spheres.

Conclusions

As mentioned, geography as a discipline has a long-standing concern with understanding the earth and its diverse environments as the home of man. Therefore, it is not surprising that the environment has always been an important component of teaching geography at school

While knowledge and skills components of environmental education are substantially represented in geography books for schools, other components of environmental education such as human attitudes, values, motivations and commitments on environmental issues have been grossly under valued Therefore, geography curricula need comprehensive alteration to make the subject as the leader in promoting environmental education in schools. Ideally speaking, these should be structured to fulfill the following objectives of environmental education·

- To help people understand and appreciate man's place in the natural environment.
- To help learners become knowledgeable about their natural environment and the problems plaguing it
- To help develop informed attitudes of concern for environmental equality and the processes and nature of its deterioration.
- To help create concern and commitment for environmental problems
- To help learners become aware of the opportunities for participating in environmental problem solving
- To motivate learners to participate in environmental problem solving
- To help create environmentally responsible citizens who are aware of the needs of sustaintable development.
- To develop enthusiasm for, and enjoyment of, our environment by improving our understanding of environmental and cultural challenges that face the world.
- There is inseparable and seamless connection between formal educational context and every day human lived experiences Therefore, environmental education must be set into human life contexts work place, school, family, habitat, region, nation and the world.

In a nutshell, environmental education in geography should be guided by the themes of life-long education and life-enhancing education. At the same time, it should also address the complex issue of the linkages between and among the environment, society and culture

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The Principles of Education...

The first principle of true teaching is that nothing can be taught The teacher is not an instructor or taskmaster, he is a helper and a guide. His business is to suggest and not to impose The second principle is that the mind has to be consulted in its own growth. The idea of hammering the child into the shape desired by parent or teacher is a barbarous and ignorant superstition. It is he himself who must be induced to expand in accordance with his own nature... The chief aim of education should be to help the growing soul to draw out that in itself Principle of education is to work from the near to the far, from that which is to that which shall be .. a free and natural growth is that condition of genuine development...

A Preface of National Education
Sri Aurobindo

Learning Scientific Spirit by Group Inspiration Method

S Balasubramanian*
B. William Dharma Raja**

Imbibing scientific temper and questioning mind are the major aims of science education in schools. Bringing science nearer to the learner by providing him/her direct experiences from the immediate environment form the base of teaching of science in schools This experiment by the teacher educators presents how children could be made to work together by group inspiration method to learn the spirit of inquiry.

In this scientific world, in every walk of life the science and technological principles are applied. We enjoy lot of facilities through the outcome of science and technological development. At the same time it is our responsibility to make the younger generation to realise the facts behind every advancement. This is the way through which we can encourage them to explore and experiment the world. Imbibing scientific spirit and questioning mind among the young children would triger them to be scientifically spirited. Children learn the facts and experiment by working together. They are always probing as why? What? How? When? etc. When such tender minds realise the scientific principles, they feel the wonder of the facts and by which they are motivated and start to explore. To stimulate such tender probing minds, teachers have to learn more and more to be a treasure of knowledge Moreover, in all fields today, the scientific approach leads to achievements So children are to be trained in the scientific approach in the primary and secondary stage of education, to develop the research attitude. Teachers' motivation and children's interest collaboratively will lead to the inventions of the world. In order to make the children learn the facts about science and learn together

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* Lecturer, **Senior Lecturer, District Institute of Education and Training, Kumulur, Thiruchirapalli Dist , Tamil Nadu

by exploration, the Group Inspiration method has been used by the authors. The following section describes the method and the activities conducted

Group Inspiration Method

It is a group teaching method, which consists of 5 steps which could conducted in 45 minutes. Though this method is applied for all subjects, it could be done well in science

Step – 1 Teacher Talk

In this step, the children of a class are arranged in a circle and the teacher has to sit among them. Then the teacher has to present the concept by narration, demonstration or by dramatization.
The teacher has to follow the aspects given below:

a) The presentation should be children's level

b) Teacher should present with expression, intonation, body language, actions, gestures, etc. by which children should be made to feel the wonder

c) The wonder and imagination along with the concept taught should make children to think with curiosity. This way the presentation should inspire the children

d) The presentation should be brief for about 10 minutes only. Children should observe the teacher without interaction.

e) Teacher can avoid more words, long information, irrelevant and difficult words.

Step – 2. Children Activity

Children should be given opportunity to express what they have learnt in the first step They can express in writings or drawings on papers or notebooks. Then the teacher can collect them and make an overview of their performance and the better performance should be circulated among the children for observation so that children can know their abilities and improve If necessary the teacher should go around to see children's performance and guide them. Here children can be given opportunity to express themselves to the extent to which that they have been inspired in the first step For this step, 10–15 minutes should be given to children This provides opportunity for children to get chance to express their original thinking and creativity. Children may express what they listened in the first step or sometimes with imagination and previous knowledge they create something new, related to the content. However, children are given chance to think and do some activity

Step – 3· Teacher–Children Activity

In this step, teacher and children have to work together. Here interaction can take place. Children can question the teacher, clarify the doubts, teacher can question the children to write answers on the board or on the notebook. Children can do some activity or teacher and children can do together, based on the concept given in the first step. This step also gives opportunity for reinforcement. Apart from that, children develop cordial relationship with teacher, learning atmosphere develops, child-centered education takes place and children learn with freedom As a whole this step develops the scientific attitude to the children, and also science learning takes place interestingly For this 10 minutes should be allotted.

Step – 4 Materials Announcement

Related to the content some materials are to be collected or prepared by the teacher, for the next day's activity in the classroom for children Those are to be announced to children that they are going to work with them in the next day. Children can work with them in the next day and that could be evaluated. Here children can recapitulate what they have learnt in the previous day. They can strengthen their knowledge. Moreover, slow learners also can learn at their own pace. This way their learning stays in the memory for a longer period. 5 minutes can be taken for this step.

Step – 5: Followup

In this step, children should be given opportunity to explore things in and around the school, near the house in the village or town. Teacher should plan and announce the follow-up according to the children's level related to the content. Teacher has to give scope to children for exploring things in order to develop scientific attitude and questioning spirit among children.

As said above, the teaching-learning should be done in five steps for 45 minutes. Here the teacher's plan, effort and involvement will play a vital role in making children to be the future scientists. 5 minutes should be taken for this step. The following model lesson using the group inspiration method presents how the lesson should be conducted.

Group Inspiration Class – Model

Standard III: Environment Studies

Lesson-7. In the Grandpa's Garden

Steps – 1 Teacher Talk

We live on this earth. This earth is very big. You know how big is this! When we see around us we see upto the extend of vision limit. But the earth is millions and millions of times bigger than what we see That much bigger it is Such a big earth this is. This earth has lot of things in it. Many things have life They are all living beings Many other things do not have life. They are non-living things Among the living things the plants are so many millions and occupied the major part of the land Plants are living on the land in oceans, rivers, lakes, ponds, etc Moreover, very very small plants which cannot be seen by eyes are living on the earth Then small grass, herbs, shrubs, very very broad, tall, big trees also live on the earth

Herbs are short and with short life time Their stem is tender Rose, Brinjal are examples for herbs There are many herbs with colourful flowers. Shrubs are taller than herbs but shorter than trees They have thick stem, they can also produce colourful flowers and fruits They live for years They may grow to the height of a man or a two. Hibiscus, sapota are shrubs.

The trees are big plants. They may be very tall equal to some coconut trees kept one on the other. There are very big stout trees occupying large area in the forests. Some are coconut trees, some mango trees, etc. They have very strong stem There are other plants which are creepers and climbers. They have tender stems and spring like structure They cannot stand erect and grow on the earth or on the trees or other supporting structures They may live for short time and some live for years These plants live in different places on earth. They are very much useful to man in many ways. Let us all preserve them

Step – 2: Children Activity

The teacher says, "Now you all can take the notebooks and draw and write on whatever you have heard from me "

Step – 3· Teacher-Children Activity

The teacher looks at the plants which S/He has brought and keeps on the table S/He says, "Here I have many plants. You can take them one by one and tell me the name, kind and nature You can discuss in groups and tell me, write on the board, ask questions and clarify "

Step – 4 Materials Announcement

The teacher, "I have collected many plants, pictures and plant products Could you all see them now? You can do activity with them tomorrow "

Step – 5 Followup

The teacher, "You could collect plants from your hour surrounding, school surrounding in your garden and in your village You can make album with pictures. Tomorrow or the day after you can bring them to the class and share about your collection."

Special Features of Group Inspiration Class

1 Making children sit in circle and delivering, helps to attract children's concentration
2 Teacher's plan becomes essential
3 Children are able to express their understanding about the content and teacher can immediately know about the level of achievement.
4. Children are put in wonder, imagination, thinking, inspiration to understand the concept. These aspects help for the development of cognition of children.
5. Children's creativity and critical thinking could be identifed and developed
6. Children learn in free atmosphere which helps to develop teacher-children rapport which in turn facilitates better learning
7 Children have the opportunity to recall what they have learnt in the previous day and engage in activity which helps for the reinforcement of children's learning
8 Children are practiced to know about their environment and to explore

from the environment This develops scientific and research attitude to children

9. Group learning develops lot of good tendencies and values among children.
10. Teacher needs involvement and skills to plan and practice this method.

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Gender Differences in the Perception of Parental Treatment

KUSUM AGRAWAL*

This study is intended to find out if there is any significant difference between boys' and girls' perception of parental behaviour. Sample consists of 170 boys and girls studying in the institutions of Pauri Garhwal Perception of parental behaviour was assessed with the help of Parent-Child Relationship Questionnaire (PCRQ) developed by R.A Singh (1981). The results indicate that parental behaviour changes with respect to the sex of the child However, significant differences were observed on disciplining and punishing variable for boys and girls.

FAMILY is one of the basic social institutions. It plays a pivotal role in shaping the personality structure of an individual Since the family has almost exclusive contact with the child during the period of great dependency the greatest platicity and continued to intimate contact over a subsequent period of several year, it plays a significant role in determining the behaviour patterns which the child will exhibit. There is general agreement among the social scientists that the way in which the child interacts with his parents and the type of influence which the parents exert on their wards may have significant contribution towards developing the potentialities of the individual. Dhaundiyal (1984) and Chauhan (1979) found that behaviour problems and maladjustment among children are largely a consequence of home environmental conditions. Researches show that home and child rearing practices influence the personality development of the child (Hurlock 1959, McCord etc al. 1992, Schaefer, 1969 and Desousa 1970). Home also influences child's achievement (Grandall Perston and

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* Reader, Department of Education, H.N.B Garhwal University, Sri Nagar, Garhwal, Uttranchal

Rabson 1960 and Baldwin and Baldwin 1973) and adjustment (Longdon and Stout 1955, Maccoby and Gibbs 1984 and Dinkney 1967) Alongwith child rearing practices, culture of the community plays an important role Infact child rearing practices are influenced by culture of the community and hence they vary from culture to culture. Besides, researches show that varying cultures, rigid caste system and parental behvaviour according to customs of community do influence the development of child (Whiting and Child 1953, Keslinger 1953, Steward and Steward 1973 and Fagot 1973)

Besides the cultural pattern of the community, the preference for sex also determines the child rearing practices An individual's sex is obviously both a biological and social fact. Biological predispositions interact with the impact of social experience which inturn shape the psychological makeup of the person Most of the researches done on sex differences in behaviour relates to infants. The amount of interaction between parent and young child does not consistently depend upon sex of the child. Majority of the studies reported on sex differences

Parental behaviour changes according to the sex of the child in different communities and it is evidenced that discriminative practices are adopted for female sex in India too. Discriminative practices are also prevalent in education, health and freedom to play. It shows unfair deal to fair sex in India. Kapoor (1993) noticed that maternal acceptance and rejection is more related to adjustment in case of female rather than male adolescents, children of both sexes expressed low degree of moral judgement who perceived maternal rejection.

Culture of the community and its attitude towards sex influence parental behaviour and thereby the development of the child. How children perceive changes in parental behaviour is a problem for study, the present investigation was undertaken to study the perceived parental behaviour in relation to sex

Leosa and Brophy (1972) reported that girls perceived their mother to be more affectionate and more accepting. On the other hand, in some studies reported by Kagan and Lemkin (196), Sugleman (197) and Cox (1970) reported that both sexes viewed their mother as responsible for the maintenance of family solidarity and for nurturance and emotional support.

Droppleman and Schaefer (1963) found that same sex parent was more controlling than the opposite sex parent but mothers tended to be more loving and affectionate and less ignoring and neglecting. But Saxena (1993) found that delinquent adolescents perceived greater maternal rejection than their counterparts.

Most of the reserches reported in this area are of foreign origin. In the light of the above stated researches the present study was motivated to find out the influence of sex differences in the perception of parental behaviour among children residing in hilly area of Uttaranchal.

Objectives of the Study

The following objectives were stated for the study.

1. To study the perceived parental behaviour dimensions – loving, dominating, rejecting, protecting and punishing and disciplining.
2. To study the differences in the perception of parental behaviour for boys and girls.

Method

Sample

The study was conducted on 170 students (85 boys and 85 girls) between 13 to 15 years of age studying in the institutions of Pauri city Both the groups of sample were equated on parent's income and locality. Only the middle class income group of students residing in urban area are selected for the study

Tool

The parent-child relaltionship questionnaire (PCRQ) developed by R.A Singh (1981) was used to assess perceived parental behaviour.

It consists of six items scales which were prepared to denote specific and observable parental behaviour which are loving, dominating, rejecting, protecting, punishing and disciplining. A separate but identical form for both mother (M-form) and father (F-form) was prepared for Hindi medium pupils. The "Yes-No" categories were provided and summed up to yield scores for each scale assigning 1 and 0 marks respectively but in case of negative items the order of scoring was reversed The internal consisting reliability computer with Spearmen Brown formula ranged from 59 to 82.

Table 1
Comparison of boys and girls on perception of parental behaviour
(Mother's behaviour)

Variables	*Groups*	*Mean*	*S D*	*t*
1 Loving	Boys	8 14	2.19	2 00
	Girls	8 8	2.24	
2. Dominating	Boys	4 45	2 1	4.85**
	Girls	2.8	2 07	
3 Rejecting	Boys	3.75	2.01	2.25*
	Girls	3 12	1 69	
4 Protecting	Boys	6 71	1 98	1.84
	Girls	7.19	1 64	
5 Punishing	Boys	7 19	1.94	1 30*
	Girls	3.79	1 61	
6. Disciplining	Boys	7.09	2 04	1 64
	Girls	6.81	0 68	

* = Significant at 0 05 level
** = Significant at 01 level

Procedure

Every sampled student was administered the PCRQ in single classroom session with instruction to recall their parents' behaviour and answer to each item in the respective questionnaire.

Statistical Technique

Mean and S D. were calculated from the variables of PCRQ for boys and girls. "t" test was applied for the comparison of groups. The tables were interpreted for analysing the results of the study.

Mean scores on loving variable are nearly same for boys and girls. It shows that boys and girls both perceived their mother's behaviour as equally loving while mean differences on dominating and punishing variable is high which shows that boys perceived their mother more dominating and punishing in comaprison to girls Further this mean difference is significant at 0 01 level Hence it concluded that there is significant difference in mother's behaviour on dominating and punishing vareiables Boys perceived mother's behaviour more rejecting and disciplining in comparison to girls Wadkar and Palsane concluded (1987) that girls were more satisfied about parent child relation than boys.

These results indicate more dominating, rejecting, protecting, punishing and disciplining behaviour of mother towards boys It shows differential behaviour of mother on the basis of sex Boys see their mothers as stricter than girls. The results are in line with the findings of Howkes, Burchinal and Gardner (1957).

The mean values on loving, rejecting, protecting and disciplining variables are nearly same for girls and boys It shows that both the groups perceived their father's behaviour equally loving,

Table 2

Comparison of boys and girls on perception of parental behaviour (Father's behaviour)

Variables	*Groups*	*Mean*	*S.D.*	*t*
1 Loving	Boys	8 53	1 85	1.33
	Girls	8 85	1 47	
2. Dominating	Boys	4.52	1 89	3.08*
	Girls	3 78	1 31	
3 Rejecting	Boys	3 62	1 92	0.60
	Girls	3 45	1 84	
4 Protecting	Boys	7 22	1 86	0.38
	Girls	7.32	1.61	
5. Punishing	Boys	5 41	1 89	4.75*
	Girls	4 27	1.50	
6 Disciplining	Boys	7.19	2 13	0.35
	Girls	7 09	1 55	

* = Significant at .01 level

disciplining and protecting Further analysis results that mean values on dominating and punishing variables are more for boys and the difference in the form of "t" value is significant at 01 level It shows that boys viewed their father as more dominating and punishing than girls. It shows that boys are reared under more psychological control than that of girls while on loving, rejecting protecting and disciplining variable, no significant difference is found with respect to boys and girls It shows that both boys and girls are given equal acceptance and positive involvement and respect of individuality by their fathers

Conclusion

In view of the above results, following conclusion can be drawn·

1. Parental behaviour changes with respect of sex of child.
2. Boys perceived their parents more dominating in comparison to girls while perception on loving variable is nearly same Baumrind (1971) also reported that both parents use firmer enforcement with sons than with daughters It was also found that boys and girls were given equal encouragement for independent individuality.
3. Both boys and girls perceived their father more disciplining than mother. Sundberg and others (1969) found that almost 80 per cent of Indian girls and boys perceived their father as more significant than their mothers in making decision about their personal lives. Indian adolescents also identified their fathers as dominant
4. Girls perceived mother more loving and less dominating Hatfield and others (1967) also observed that mothers were more likely to restrict the independent movement of sons than of daughters.

Differential treatment to girls and boys is a special feature of socialisation in India This is worth nothing that inspite of the cultural differences girls perceive the parents to be more affectionate

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Teacher Development and Quality of Elementary Education

S.K YADAV*

Quality education demands quality teachers Producing quality and committed teachers is a major task of teacher education institutions and those involved in providing in-service education to teachers. Sound pre-service and continuous in-service with proper quality and content input would provide quality teachers. This paper, while listing the teacher competencies, analyses the need for quality teacher education.

ENLIGHTENED and committed can only help in realizing the constitutional commitment to provide quality elementary education to all the children up to the age of 14 years Now the target is set up to 2010 under Sarva Shiksha Abhiyan (SSA) programme. Such teachers can be prepared through well-organized teacher development programmes. In such programmes, necessary competencies are essential to be nurtured among the teachers for making them efficient and effective. The competencies are nothing but simple transforming inborn qualities and abilities of individual into visual utilities. It means the real development of an individual. The National Council of Teacher Education (1998) has identified ten teachers' competencies for making the teachers professionally competent. These are discussed in brief.

Contextual Competencies

The teachers should have ability to understand various contexts, such as historical background, present status of the social-economic, cultural, linguistic, and religious contexts of the family milieu and the community profile. They should know how to conduct surveys including finding out reasons for poor enrolment and courses of wastage and stagnation in schools.

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* Reader, Department of Teacher Education and Extension, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi-110 016

Conceptual Competencies

The teachers should have clarity of thought, deep understanding of educational theories and thorough knowledge of various trends, methods, techniques etc. they should know significant characteristics of child development. It will help them for transacting the curriculum effectively They should appreciate the constitutional provisions. The concepts like globalisation, modernization, liberalization and privatisation to be understood well by the teachers Only then they can translate these new concepts in to teaching learning process.

Content Competencies

The teachers should have full mastery over the content based on curriculum. They should find out hard spots, and gaps of curriculum. They should also identify such areas from the curriculum where there is enough scope for joyful activities, individual learning and group learning

Transactional Competencies

Educational transaction competency means the skill of teaching to achieve the educational objectives easily in day to day teaching learning process through meaningful interactions between teachers and pupil, pupil and pupil, pupil and the material and pupil and the environment by using different methods, activities and technology in an integrated and effective way. Variety of activities such as story telling, singing, games, field visits, celebration of national. social and cultural events should be organized with a view to making teaching-learning process joyful and participating Appropriate teaching aids and other teaching-learning material should be prepared to strengthen the teaching learning process. Continuous evaluation should be integrated with various approaches while transacting the subject content with a view to diagnosing the weakness and strengths of the teaching-learning strategy and to identify the weaker and brighter children in order to take remedial measures and give enrichment programmes respectively.

Educational Activities Competency

A skill of imaginative planning and systematic and effective implementation of curricular and co-curricular activities for achieving educational objectives is called educational activities competency The organization of these activities is necessary for achieving educational objectives. Activities are to be organized in and out side classroom

Competencies to Develop Teaching-Learning Material

The Teachers should have ability to develop attractive teaching aids for making teaching-learning process easy, interesting and activity based. They should know how to develop textual and self-learning material It will promote self-learning. They should also know to how develop workbook It will help in the management of multigrade classroom situations. Teaching-learning material should be based on new technology such as audiotapes, videotapes, slides, radio, television, computer and similar other gadget It will make teaching learning effective and interesting

Evaluation Competencies

The ability of a teacher to continuously judge and verify the level of achievement of prescribed competencies and objectives laid down in the curriculum is called Evaluation Competency. In the new approach, towards introducing competency-based curriculum, the competency-based evaluation should be adopted The teachers should carry out continuous evaluation in a systematic and formal manner Observation records should be maintained to evaluate likes and dislikes, habits, values, attitudes, etc

Management Competencies

Management competency is the skill to achieve high quality educational objective in minimum time, energy, and money through appropriate/effective use of educational aids and active participation of available human resource Every teacher is a manager of a particular class or group of students He should know the required skills of classroom management including total teaching as well as subject teaching in the class and several other tasks expected of them in and outside the school

Competencies Related to Working with Parents

Parent's related competency is the ability of a teacher to get cooperation of parents and their involvement for achieving the objective stated in the curriculum for the development of the competencies in children The role of parents is equally important in the development of child. It is imperative to establish support with them in the larger interest of pupils In order to achieve universal enrolment, parental contact plays an important role. The parents, who, due to various reasons, are not able to send their children to school, should be constantly contacted The teacher can discuss the various problems of choldren with their parents

Competencies Related to Working with Community and other Agencies

The ability to secure the co-operation and participation of society by creating in it, awareness, affinity and a feeling of responsibility for the all round development of the schools is the community rapport competency The infrastructural facilities and building should be providing with the help of community The school should undertake activities which are useful for society. A school which gets the participation of the society in its programme can overcome educational problems such as dropouts, stagnation and poor attendance in school. Village Education Committees (VEC) are established as a connecting link between the school and society. The primary education is hand over to Panchayats and Village Education Committee. The teachers should be made competent in activities like community surveys, school mapping, total population, community resources and structure, etc

Teacher Development Programmes

The above competencies are essential to be nurtured among the teachers through teacher development programme i.e., pre-service and in service training prorammes for making them professionally efficient and competent. But these programmes are to be organized according to their needs and requirements. First of all let us understand the term 'need' in general and training needs of teachers in particular A need is a gap or deficiency between what is and what out to be or gap between current status and desired or required status level

Every profession requires certain standard of performance, which should be met by its professional. If the actual performance of the professional meets the desired standards of performance then they do not need any training On the other hand hand if there is significant gap between these two, the professionals need training to improve their performance.

Teaching is also a profession. It also expects certain standards of performance from its professionals i.e. teachers If the performance of a teachers do not meet the desired or expected level of performance, there is deficiency in the performance of teachers And they need training to bring their performance up to the desired level

The performance deficiency of a teachers may either be due to lack of mastery of content/subject matter to be taught by them and/or because of inadequate mastery over teaching skills. If the performance level is low because of inadequate knowledge to the subject matter and or mastery over teaching skills, training shall definitely prove useful to equip the teacher with the requisite knowledge, to fine turing the existing teaching skills and to develop additional skills required to perform in the classroom.

Assessing Training Needs of Teachers

Need assessment is a data gathering and analysis process. This is done to identify the needs of individuals, groups, institutions, and society It helps us in generating a set of data system for strategic planning and specifying the areas in which efforts are to be placed

Now how do we conduct needs assessment for teachers? The training needs of school teachers broadly fall in three categories i e content upgradation, refinement of teaching skills and reshaping of attitudes. For assessing training needs of teachers we should clearly spell what we expect from teachers in a particular context. Then we have to assess their existing levels of performance with the helps of suitable tools and techniques The gap between the two will give assessment of their training needs The necessary data for identification of training needs of teachers can be gathered by using a variety of tools and techniques. Some of these are discussed below.

Questionnaire

It is one of the most commonly and widely used tool of collecting data about training needs of teachers. The need assessment questionnaire may be structured or unstructured

Classroom Observation

Direct observation of teacher's behaviour in the classroom is probably the most appropriate technique to identify their deficiencies in teaching skills This diagnosis helps in designing training inputs in which they are found deficient.

Focus Group Discussion

Focus group discussion involves an informal discussion among selected individuals about a specific topic relevant to the situation at hand. Focus Group Discussion is described as organised discussion around a single issue The objective is to elicit a range of opinions from individuals about an issue.

Achievement Test

Teacher's deficiency in the mastery of different school subjects can be identified through using achievement tests After identifying their deficiencies in content areas suitable training inputs can be designed to enrich and update their content knowledge.

Besides, the training can also be assessed through analysis of pupil's answer scripts

Updating Teacher Development Programme

These rapid changes inevery field have implications on teacher's development programmes Both pre-service and in-service programmes need to be revised in the light of latest development and new changes. Recently the National Council of Educational Research and Training (NCERT) has brought out a *National Curriculum Framework for School Education-2000* (NCFSE) with the objective to provide quality education and upgrade the curriculum at the school stage. Many new issues like globalization, privatization, building cohesive society, linking education with life skills, value development, meeting the challenges of information and communication technology, reducing the curriculum load, using cultural specific pedagogy, integrating indigenous knowdedge and recognizing India's contribution to the world civilization, viewing child as a constructor of knowdedge, using grading in evaluation system, learners with special education, reducing the pre-dominance of external examinations, and removing of pass and fail categories, integration of environmental education with languages, mathematics and other activities in the first two years of the primary stage have been emerged in the curriculum These emerging concerns are to be incorporated in the pre-service teacher education curriculum.

The same way the working teachers are to be updated with new concerns and issues by way of organising 20 days in-service course for all teachers each year, 60 days refresher course for untrained teachers already employed as teachers and 30 days orientation for freshly trained recruits as proposed in *Sarva Shiksha Abhiyan* (SSA) programme

Role of Institutions

After the implementation of Nationl Policy of Education, 1986, the training institutions are set up from national level to school level. These institutions are providing both pre- and in-service education programme on regular basis. The NCERT is mainly responsible at national level to provide training to Key Resource Persons and teachers. The NCERT provided training to more than 20 lakh teachers under Special Orientation Programme for Primary Teachers (SOPT). The same say, the states were helped to implement the District Primary Eduction Programme (DPEP) The academic inputs in terms of training, material and researches are being provided by NCERT for successful implementation of SSA programme Besides, National Council of Teacher Education (NCTE) and National Institute of Eductional and Planning Administration (NIEPA) are also providing training inputs at the national level The State Institutes of Eduction (SIEs)/State Councils of Educational Research and Training (SCERT) are the apex bodies in the states and union territories They advise the state governments in planning, formulation and implementing educational policies The pre-service teacher education curriculum and instructional material at elementary level are developed by SIEs/ SCERTs. The in-service education is also organised particularly under SSA at the state level.

The District Institute of Education and Training (DIET) is one of the components of centrally sponsored scheme and mainly responsible to improve the quality of elementary education and extending academic and resource support to non-formal and adult education There are about 500 DIETs in the country These are administered by state governments The major functions are to organise various training programmes, development of self learning material and conducting action researches with the following seven branches:

i) Pre-service Teacher Education Programme (PSTE) Branch
ii) In-service Eduction, Field Interaction and Innovation Coordination (IFIC).
iii) Curriculum Material Development and Evaluation (CMDE) Branch
iv) Educational Technology (ET) Branch.
v) Work Experience (WE) Branch
vi) Planning and Management (P&M) Branch.
vii) District Resource Unit (DRU) Branch

The PSTE Branch of DIET prepares teachers for the elementary stage Mostly the eligibility qualification is 10+2 for diploma course. The curriculum is prescribed by state governments. The DIET meets the demand of elementary teachers for the state The other Branches of DIETs organise the in-service training programme for all the teachers of its respective districts on a regular basis

The Block Resource Centres (BRCs) are established to provide training to teachers at the block level as per the requirement of the block The BRC coordinators visit the schools to help the teachers on the spot and also provide academic input through training programme. The monthly meetings of cluster level coordinators are organised to monitor the progress of different activities and programmes

The Cluster Resource Centres (CRCs) are also set up with the proximity of 8-10 schools. In these centres, monthly meetings are organised to discuss the issues related to curricular activities, community participation, teaching learning process, etc The model lesson plans are demonstrated by the teachers in these meetings The stock taking of different programmes are also taken in these meetings.

In can be summed up by saying that competencies on content, transactional modalities, educational activities, teaching learning material and working with community are necessary to be nurtured among teachers through pre-service and in-service programmes for making them professionally competent The new emerging issues are to be included in teacher development programmes from time to time Therefore, such need-based programmes are essential to be organised by the institutions like NCERT, SCERTs, DIETs and BRCs on regular basis for updating their knowledge and skills and also helping in achieving the target of universalisation of elementary education

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Training for Improving Roles and Functions of Educational Functionaries

Lalit Kishore*

This article makes an attempt to sensitise those who impart training to educational personnel in school education. Training is not mere knowledge transmission, it needs to serve as tool for the trainee who would train many more and use the skills to improve himself/herself The author provides strategies to follow for an effective training, besides suggesting the dos and don'ts of a training.

Consequent to the National Policy on Education of 1986 and Education for All (EFA) project floated in early 1990s, there has been a renewed emphasis on training of teachers. Also, a cadre of master trainers, key resource trainers and resource persons is being used for mass training of teachers. The trainers of trainers require new insights in area of training as a field of study itself. Besides this, the trainer has to perform various roles during the training sessions especially when the training stresses the participatory training methods.

Understanding Training

Jinks (1979) defines training as an organised activity which brings about semi-permanent change in mindsets and behaviour for a definite purpose. The main areas involved in training are skills, knowledge and attitudes Jinks further clarifies that training has job-related objectives while education has society-based objectives The training need is the gap between the knowledge, skills and attitudes that a job demands and the ones already possessed by the trainees.

According to Jinks, training is required because of the following reasons:

- Mismatch between actual performance and standards set by the organisation collectively
- Change in work or functions due to changing circumstances

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* Senior Co-ordinator, Bodh Institute of Education, AA-1, Anita Colony, Bajaj Nagar, Jaipur.

- Change in the job or new entrants to the organisation.

Bishop and Taylor (1995) say that 'in our experience adult learners must be motivated in order to learn. They need to be engaged actively in learning and helped to become self-directed or less dependent on the trainer. They should be able to relate learning to their own experiences, needs and situations ' Bishop further adds that it should recognise what experiences of life and of work trainees bring with them on courses. These should be valued by the trainer. In other words, the group of trainees iteself is to be regarded as a vital training resosurce.

Roles and Functions of Educational Functionaries

Since the training is related to the understanding and excuting one's functions in an organisation skillfully The generic roles of a functionary are to be understood and related skills be practised for it proper transfer to the work-situation. The common roles and related functions of an educational functionary have been summarised in the following table

Table 1
Roles of an Educational Functionary

	Role	*Functions*
1	As an awareness generator	• Understanding causes of the present reality and making clientele conscious about the causes • Enabling clientele to collectively articulate • Arranging meetings and discussions • Enabling clientele to see the need for an intervention or collective action to overcome causes • Creating demands/needs for corrective measures collectively • Disseminating new ideas and attitudes.
2.	As a facilitator	• Creating a mutually respectful and group learning environment • Creating favourable conditions for interrelations among individuals and groups • Sharing experiences and information to create collective consciousness • Organising group learning and self-learning • Preparation of learning material and using it effectively • Setting personal example through enthusiasm for learning and doing things
3	As an evaluator	• Understanding and interpreting various records, data, and information

		• Evaluating available data for monitoring and correction • Organising individual level and group reviews • On-spot support and guidance skills • Openness to enhance one's own capability to assess or evaluate
4.	As a followup organiser	• Readiness to provide back-up support to an initiative • Keeping up interest and enthusiasm through encouragement and by becoming a part of new initiatives • Identifying and recording emerging needs • Reflection on action and mid-course corrections • Documenting action cases and diary keeping • Organising or participating in follow-up and review workshops

Training can be organised keeping the above-mentioned roles and functions of educational functionaries According to Lynton and Pareek (1990), training should lead to a lasting improvement on-the job situation. The training is not for knowing more but for behaving and doing things differently. Training is then concerned with people-on-jobs performing various roles

Dos and Don'ts for the Trainer

Jinks (1979) has worked out some dos on the basis of the experiences of successful trainers. These are:

- Treat all the trainees as indivkduals and get to know them.
- Use a friendly manner and be approachable and straightforward during training.
- Try to put trainees at ease—no one learns when nervous.
- Remember you are a model—trainees will learn from your personal example.
- Give feedback and re-inforcement of good learning.
- Be yourself and be humourous

Khurana (2001) provides some of the don'ts for the trainers as follows.

- Don't control the trainers with classroom mind-sets of 'chalk and talk sages on the stage', and 'time work overhead transparencies'.
- Don't control the trainees—collaborate with them.
- Trainer should not speak for more than 10 to 15 minutes in a session of 90 minutes. Trainer must work hard at designing interactive exercises, games and syndicated thought provoking session. Let the participants share and learn from one another.
- Unclear expectations, lack of inter-personal support, poor supervision can greatly diminish the effects of training programmes.

- Training at times becomes a number crunching game. How many programmes conducted? How many people attended? What is the cost of training per employee? How many training days per employee per year? These are some of the questions that become important for going into the annual reports only Don't get bogged down by these reports.

- Cause of failures of a training are:
  - (i) The classroom mindset of lecturing
  - (ii) Predictable/rigid trainer design and delivery package
  - (iii) Pitfalls of a contradictory environment
  - (iv) Lack of trainers' commitment

Besides the dos and don'ts of the training, there is a need to pay attention to the aims and objectives of the training; subject matter; topics and issues; methods of training, follow-up of the sessions; logical progression of the training along with maintaining a friendly and participatory training environment

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Creating Environmental Awareness Among Primary School Children Through Field Trip

JEENA JAMES*

The most affected victims of environmental pollution are the young children who are the wealth of our nation. Even though primary school curriculum is environment based, children are unaware of the environmental problems in their immediate surroundings This is mainly because of the traditional method of examination-oriented teaching adopted by the primary school teachers. In this experimental study, an attempt has been made to create environmental awareness through field trip and innovative followup works The results showed an appreciable raise in awareness among primary children about environmental pollution. This paper argues that teachers must accept field trip as worthwhile activity because it is proved to be the most effective outdoor aid to make children aware of the disasterous results of pollution.

IN order to meet their growing needs and greed, human beings exploit the environment and thereby cause pollution or unfavourable changes in the surroundings. The most affected victims are the young children who are the wealth of our nation. They are unaware of their immediate environment and its allied problems. To make them aware, the whole curriculum in primary level is environment based. National Curriculum Framework (1988) developed by NCERT recommended that at the lower primary level, environmental education is to be taught not as a separate subject, but in an integrated manner with all subjects. The causes, effects and control measures of environmental pollution is clearly narrated in the EVS textbooks of primary school in almost all the states But the primary children are not fully aware of the environmental problems

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* Lecturer, District Institute of Education and Training, West Lutheran Road, Nagercoil, Tamil Nadu-629 001.

because of the wrong choice of the teaching approaches adopted by the teachers The teachers are concentrating in completing the syllabus for academic achievement without giving any activities to the children. Hence efforts should be taken to educate and prepare the children through various activities to raise awareness and sensitivity to environmental problems.

Environmental Awareness

Creating environmental awareness among primary children is required since it helps them to acquire the skills of perceiving, identifying, involving and solving the environmental problems. The different faces of pollution such as Land, Water, Air and Noise pollutions are present within their home and school surroundings, but they cannot feel or sense the ill effects which affect their physical, mental and emotional health. They innocently interact with the environment without knowing the danger. For example, some of the ignorant behaviours of children observed by the researcher in villages are stated below:

- Playing in the areas where garbages and other domestic wastes were disposed.
- Eating food without washing hands.
- Disposing the food wastes, papers and polythene bags scatteringly on school campus after lunch.
- Drinking untreated and unprotected water.
- Cleaning mouth, bathing and washing of utensils in ponds where all types of domestic wastes are disposed
- Defecating in the banks of ponds and in open fields on both sides of the road.
- Bathing in the ponds and rivers where cattle and vehicles are washed
- Running behind vehicles fitted with loud speakers
- Lighting noisy fireworks in front of the houses and road side.

It is a sorry state of affairs that the children living in the highly polluted environment are unaware of the disaster. Who are responsible for these unhealthy habits of the little children? Just think of it. Such undesirable behaviours should be changed by creating a repulsive attitude towards such activities. So there is an urgent need to expose children to their immediate surroundings to understand the environmental problems which affect their lives World Environment Day commemorated each year on 5 June which was established by the United Nations General Assembly in 1972, is one of the important ways through which the United Nations stimulates worldwide awareness of the environment and enhances political attention and action.

Field Trip

To bring about awareness and desirable attitudinal changes in the children for recognising the importance of a hygienic environment for a healthy living, field trip can be used an effective method. The values of field trip may be summed up as follows:

- Furnish first hand informations to supplement, enrich and vitalise classroom instruction

- Help the children to understand their own environment
- Children learn how to observe, explore, understand and react to the environment
- Create situations which help to develop a spirit of scientific enquiry.

Field trips have proved a good amount of success in teaching environmental pollution The examples for all types of pollutions are existing in daily life situations and within the local surroundings itself. It is the duty of the teacher to identify the appropriate areas of scientific importance and take the children out of the classroom for direct experiences Thus the learning becomes more interesting, accurate and meaningful

Objectives of the Study

The present study was undertaken for the attainment of the following objectives

1. To find whether there is a change in awareness about environmental pollution among primary school children through field trip
2 To find whther there is any difference between boys and girls in the change in awareness of environmental pollution.
3 To find whether there is any difference between Tamil and Malayalam medium children in the development of environmental awareness.

Methodology

In the present study, pre-test, post-test, single group design was followed.

Sample

The sample was selected from Govt. T V.P S , Palukal, a village school situated in the southernmost region of Tamil Nadu bordering Kerala The schools has both Tamil and Malayalam medium sections. The sample of the study consisted of 24 children (11 girls and 13 boys) studying in Fifth standard, of which 11 from Tamil medium and 13 from Malayalam medium.

Tools

A questionnaire containing 20 items was constructed by the researcher with the help of experts. The items were in the form of statements and a three point scale was given to respond So the minimum mark was 'zero' and maximum mark was 40 After the selection of the sample, a pre-test was administered using the questionnaire to measure the awareness of the children and the same questionnaire was used for the post-test.

Procedure

In classroom instruction the causes, consequences and control measures of different types of pollutions were described in detail The children were taken to the nearby places where they got varied life experiences directly. The field trips were conducted to the following places·

- An open drainage in front of the primary school.
- Banks of a nearby pond where disposal of waste material and defecation is common.

- Backside of the toilet and kitchen in the same school campus where waste water stagnated
- A paddy field.
- A cashew nut factory
- Main road in front of the school to understand automobile pollution.

During field trips, the children were instructed to observe the environment thoroughly and their doubts were clarified. Moreover, the children were properly guided to sense the deteriorated environment and felt the inconveneience and disturbances due to the polluted environment.

After every field trip, the children were allowed to discuss what they have seen in the field to recall the highlights of the trip This was highly effective since the children expressed their feelings and opinions frankly. This resulted in a welcome change in their attitude towards environmental problems

The innovative follow-up works given to the children are listed below:

- Drawing and paintings of the pictures depicting the scenes of polluted environment
- Slogans and verses were written on chart papers and card boards and put up on the walls
- Making badges and placards
- Collection of pictures and album making.
- Singing songs about environmental protection.
- Taking oath emphasising their own role in keeping the surroundings clean.

All these activities were aimed at developing awareness about environmental polllution

Analysis of Data

The performance of the children in the pre-test and post-test regarding the awareness about environmental pollution were compared and analysed gender-wise and medium-wise The scores of responses were analysed statistically by using arithmetic mean, standard deviation, average gain and gain percentage to derive conclusions.

In table 1, the mean scores, average gain, and gain percentage of boys – girls, Tamil medium – Malayalam medium and

Table 1
Comparison of Pre-test and Post-test Scores

Sl No	*Category*	*Sample Size*	*Pre-test*		*Post-test*		*Average Gain*	*Gain Percentage*
			Mean	*S.D*	*Mean*	*S.D.*		
1.	Boys	13	12.00	3.40	31.38	3.48	19.38	48.45
2	Girls	11	11.82	3.84	32.09	2.95	20.28	50.70
3	Tamil Medium	11	12.91	3.86	32.36	3.67	19.46	48.63
4	Malayalam Medium	13	11.08	3.23	31.35	2.76	20.07	50.18
5.	Entire Sample	24	11.92	3.57	31.70	3.19	19.78	49.49

the entire sample were compared and analysed There is a considerable improvement in the mean scores of boys from 12 00 to 31 38 and girls from 11 81 to 32 09. The mean score of Tamil medium children improved from 12 9 to 32 36 and Malayalam medium from 11.08 to 31.15. For the entire sample, the mean score raise from 11.81 to 31.7 shows an average gain of 1978 that is an increase of 49 5 percentage.

Table 2 shows a Gender-wise, Medium-wise comparison of post-test scores There is no significant difference at 0 01 level of significance among boys and girls, Tamil medium and Malayalam medium children.

Major Findings

1. The results of the study have shown that the first hand experiences through field trip and the innovative follow-up works were found to be highly effective in boys, girls, Tamil medium, Malayalam medium and the entire sample in creating awareness about the environmental pollution.
2. The impact of field trip experiences in acquiring awareness of environmental problems is found to be same among boys and girls.
3. There is no significant difference among Tamil medium and Malayalam medium children in the development of environmental awareness.

The National Policy (1986) reiterates, "There is a paramount need to create a consciousness of the environment". This study was conducted to satisfy this need and attempts were made to create awareness about environmental problems through field trips and various activities The results of the study showed an appreciable development in the awareness and attitudinal changes of the children in a desirable way.

The curiosity, interest and involvement of the children in various activities showed that the young minds get ready to acquire the skill for identifying and solving environmental problems During discussion session, it was noticed that they were very much interested to share their own experiences and eager to clarify their doubts regarding the ill effects of pollutants in their surroundings. The teachers must accept field trips as worthwhile as they provide opportunities to our children to enhance accurate observations and draw their own conclusions. An enthuiastic

Table 2
Gender-wise, Medium-wise Comparison of Post-test Scores

Sl No.	*Category*	*Sample Size*	*Post-test*		*t-value*	*Result*
			Mean	*S D*		
1	Boys	13	31 38	3 48	0 15	Not significant
2	Girls	11	32.09	2 95		
3	Tamil Medium	11	32 36	2 67	0 26	Not significant
4	Malayalam Medium	13	31 15	2 76		

techer can find time to plan and organise field trips since it was proved to be the most valuable, enriched and effective outdoor aid which widen the mental horizon of the children and make them aware of the disasterous results of pollution We, the teachers and parents should come forward whole heartedly to save our children from the deteriorating world by developing awareness and positive attitude towards environmental protection

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Modalities of Teachers' Empowerment for Development of Abilities in Elementary School Children

SUSANTI MISHRA*
TAPAN KUMAR BASANTIA**

In the present study, the investigators have organised a number of creative activities for developing various abilities in school children. An experiment was designed by the investigators to assess the effect of the organised creative activities on the development of students abilities, i.e. knowledge, skill, application, creativity, etc at the elementary stage. From the analysis of the result, it was found that well organised creative activities can enhance different abilities in our school children.

Introduction

Today we are very much conscious about the qualitative improvement of elementary education. Teachers' empowerment and teaching strategies have assumed to play important role to improve the quality of education. The Minimum Level of Learning Strategy (MLL) has been widely disseminated across the country and used as a basic guideline for compentency based teaching approach and evaluation at elementary stage. These competencies are not only related to the cognitive aspects of the students' behaviour but also to the non-cognitive areas. Evaluation of the achievement of the learners help the teacher to be confirmed regularly whether the competencies have been mastered by the learners or not. It is assumed that, through creative activities, a teacher can foster the cluster

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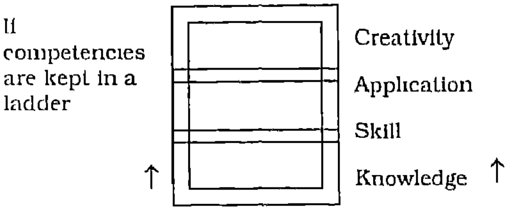
* Teacher, D.M School, Regional Institute of Education (NCERT), Bhubaneswar 751 022
** Junior Research Fellow, P G Department of Education, Ravenshaw (Autonomous) College, Cuttack 753 003

of inter-related competencies and assess the same in our school children.

Development of Competencies through Creative Activities



(Creativity itself is a higher order of competency)

Development of all these four competencies into a target level is the main concern of present education in our schools In order to achieve the highest order of competency (i.e creativity), we have to master/climb up other three steps, i e. knowledge, skill and application.

One of the major objectives of providing education and learning experience to the children through competency based teaching approach at elementary stage is to encourage in the child independence and creativity by providing him/her sufficient opportunities for self-expression through creative works in teaching-learning process

In this project, different modalities for creative activity structures were followed for developing the various learning abilities among elementary school children The study was conducted in Demonstration Multipurpose School, Regional Institute of Education, Bhubaneswar, Orissa

The Study Attempted to Answer the Following Questions

1. How to make a design of different modalities for creative activity structures?
2. Whether the creative activity based structure can be organised through different modalities in classroom situation?
3. Is there any effect of the creative activities upon the development of various abilities of pupils?

Procedure Followed

Planning. A systematic planning was done and written plan was made following the creative activity structures for a content "our State Orissa" which is blended with a cluster of competencies of three different subjects, i.e. Environmental Science, Regional Language (Oriya) and Art Education for Standard III, Standard IV and Standard V pupils.

Designing Modalities for Creative Activity Structures for Development of Various Abilities

Content (Orissa State)

Environmental Science I

1. To develop the sense of togetherness
2. To acquaint with the achievements of great people.
3. To acquaint with time and space relationship

First Language/Oriya

1. To develop comprehension ability and speak on known themes, dialogues.
2. To understand salient facts and generalisation to develop creative writing skill.

Visual and Performing Art

1 To acquire skills of handling tools (Learning to perform).

2. To prepare and display useful activities and things.

3 To develop abilities to perform different tasks of eye hand co-ordination

Strategies

1 The children were provided written plan and instruction for group activity.

2 The children were provided opportunity for acquisition of learning experience through creative ideas in democratic climate for self-expression

3 The classroom was made workable with distribution of chart, learning material and other teaching aids

4 Identify learning task by motivating with reward

Table-1

Design of Creative Activities

Sl. No	*Type of Activity*	*Creative Activities*	*Support materials*	*Learning mode*
1.	Art and Drawing activities	i Drawing the map of Orissa ii Drawing different pictures relating to content iii Designing and painting the pictorial maps.	Paper Colour, Chart Picture, Gum, Cardboard, etc	Self learning [Self work mode]
2	Doing activities	i Doing models ii. Doing picture and other material collection iii. Arrangement of materials in proper order iv Stitching work	Clay, Cloth, Needle, Thread, etc.	Co-operative [working setting from knowing to performing the works]
3	Other creative activities	i. Creative writing ii Narrating and speaking iii Role playing in drama iv Dance and music activities	Books, Magazines Literature, Script, Autobiography, Musical instrument, tape recorder, etc	Self learning and cooperative [Integration of knowledge and skills is working Emphasising gestures and face expression Performance with rhyme and musical activities.]

5 The children were motivated for participation by creating interesting situation through stories, dialogues, pictures, song and dance activity, etc.

Design of the Experiment

Phase I A proforma to record learner's attainment was made to record the entry level behaviour on various abilities.

Phase II Practice

(i) *Identification*: 10–15 projects were assigned to each class. Selection of projects were done according to the interest of pupils and on lottery basis

(ii) *Execution* Various activities were oreganised with the help of teachers' guidance in group or individual. Time factor, physical and psychological environment were taken into consideration

(iii) *Evaluation*: Evaluation was made on the basis of

(a) presenting of the project to the class

(b) facing question answer session

(c) Appearing written and oral teacher made test.

Analysis of Data and Discussion of Results

Analysis of data was done by using statistical means, to see the significance of the difference between the entry level behaviour and the achievement after execution of the project.

Table-2
Assessment of Pupil's Scores in Tabular Form

Class & Section	*Total No of Pupils in the class*	*Pupils Assessed in Pre-test*	*Pupils assessed in Post-test*
III A	40	30	30
IV A	40	30	30
V A	42	40	40
Total	122	100	100

Table-3
Significance of Differences between Means of 1st and 2nd Test

Test	*N*	*Mean*	*S.D*	* *"t" value*	*D.F.*
Pre-test	100	14.4	16.310	15.125	198
Post-test	100	25.26	3.438		

* "t" is significant both at 0.05 and 0.01 level.

Table 2 shows the details of the sample of students assessed in both 1st and 2nd test

Table 3 shows the significance of differences between the entry level of behaviour and the achievement after the execution of the project And it indicates that the calculated 't' value 15 12 is more than the table value of 't' both at 0 01 level and 0.05 level So it was concluded that there is a significant difference between pre-test and post-test score resuslts.

It can be said that the organised creative activities through various modalities has significant impact on the development of various abilities in primary school children

On the basis of the results of the above study, it can be concluded that the modalities of teachers' empowerment for organising creative activities helps for developing the following abilities in primary school children.

(i) It helps in developing practical skills, i e. to do, to demonstrate, to prepare to make and to design an object.

(ii) It helps in preparing appropriate aids in enhancing musical and aeshetic sense, writing skill, developing interacting ability and developing sensory physical and moral development

(iii) It helps to develop intellectual ability, manipulative ability and social skills.

(iv) It helps in shifting of school skills to life skills and learning to perform.

(v) It provides adequate opportunity for multigraded setting and large sized classes.

(vi) It helps for transfer of learning experience from one subject to another, i.e EVS I to Language and Art, etc.

(vii) Creative activities can act as an aid to assess the development of cluster of interrelated competencies and abilities among the learners from time to time.

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Potentials of Radio Programme, *Gyankalash* for Teachers–a Himachal Pradesh Experience

N.K. Gupta*

Because of facility of live broadcast, better sound quality (bandwidth), wide outreach and large network, radio is regaining importance in the field of education world over. Tapping the advantage of the medium, distance education component of District Primary Education Project (DPEP), Himachal Pradesh successfully launched a capacity building radio programme for primary school teachers in five phases over a period of nearly two years (October 2000 to July 2002) through Radio broadcasts The programme 'Gyankalash' aimed at on-the-job training/orientation without withdrawing teachers from the schools, and was popular with an inbuilt feedback mechanism in the form of responses sought from teachers at the end of each episode, questionnaires sent to audience, teachers' live interview on radio for best answers, discussions in Cluster Resource Centres (CRC) meetings, phone-in programmes, sharing experiences live on radio, etc

However, a systematic impact study of the programme 'Gyankalash' was undertaken in its concluding phase in order to ascertain its effectiveness and to identify the models which could be replicated elsewhere. The opinions of the respondents and findings of this study have been reported in this paper Teachers' demand for raising the time, shifting time and increasing frequency were the parameters of its popularity The broadcast lessons were found to be informative, relevant and joyful by the audience. The lessons raised the attendance of students in the schools. Gyankalash motivated the teachers to innovate new strategies for pedagogy and use playway techniques of teaching in the classrooms.

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* Reader, Department of Educational Research and Policy Perspectives (DERPP), NCERT, Sri Aurobindo Marg, New Delhi-110016

Introduction

The Distance Education Programme (DEP) in DPEP, initiated in 1996, was striving for qualitative upliftment of primary education of DPEP districts of India with a goal of universal access, retention and educational enhancement. Different delivery media with their specific strengths and limitations were being used in distance education Distance Education Programme made use of a combination of different media too However, experience there has revealed audio as a pedagogically effective medium due to its inherent implicity, such as lack of visuals, non-interactive nature of the listners and makes them active participant in the educational transaction by involving them in the teaching-learning process

Gyankalash

With the launch of DPEP in four educationally backward districts of Himachal Pradesh a great deal of orientation and content upgradation courses, workshops and training led to frequent withdrawal of teachers from schools. Difficult hilly terrain with restricted mobility led to lack of access to knowledge and information for both teachers as well as the inhabitants of the area In such a scenario radio emerged as one of the most popular media for distance education

Recognising the powerful potential the Distance Education Programme, DPEP opted for "Radio" for providing academic support to the teachers To strengthen and supplement the ongoing teacher-training programme DPEP, Himachal Pradesh launched a capacity building programme using radio on 5 October 2002 for training their primary school teachers through All India Radio (Shimla) named *Gyankalash* which means 'a treasure of knowledge'

- Table I and Table II give an overall view of the schedules. The whole programme was broadcast in five different well-planned phases. The broad themes of different phases have been/ indicated in Table I.

Impact Study *Gyankalash*

Gyankalash was seen as a popular programme in DPEP circles of Himachal Pradesh. The enhancement of duration from 15 minutes to 30 minutes and frequency from two days to three days with requests for repetitions of some of the episodes by the listners are indicators of its positive impact. Nonetheless it was decided to obtain empirical evidence on the impact of *Gyankalash*. It will not be out of place to put on record that even non-DPEP district teachers were listening to it and responses were being received from Hamirpur and Dharamshala districts also

Table 1
Broad Themes of Different Phases

Phase	*Theme*
I	Integrated Teachers Training
II	School Readiness
III	Teaching of EVS
IV	Teaching of Hindi language
V	Teaching New Textbook Class I

Objectives of the Study

The study was undertaken with the following objectives

1. To study the extent of awareness of the programme among primary school teachers.
2. To study the audience characteristics listening to the programme *Gyankalash.*
3. To study the use of *Gyankalash* for teaching-learning process among teachers.
4. To study opinion of the audience about the *Gyankalalsh.*
5. To study the overall impact of *Gyankalash* programme on the audience.

Methodology

Sample Selection

The study was undertaken by sending questionnaires to 1000 audience teachers who were registered with DPEP under *Gyankalash* Out of 1000 only 442 teachers sent back their completed questionnaire by sending their responses to the respective clusters and blocks The sample represented all clusters of the

Table 2

Different Phases of ***Gyankalash***

Phase	*Theme*	*Clientele*	*Period*	*Broadcast Days*	*Time*	*Duration*	*No of Episodes*
I	Integrated Teachers, Training	Primary School Teachers and Teacher Educators	05-10-2000 to 11-01-2001	Thursday Saturday	7 05 P.M to 7 20 P M.	15 minutes	28
II	School Readiness	Teachers, Teacher Educators, Parents and Community	08-03-2001 to 12-05-2001	-Do-	-Do-	-Do-	20
III	Teaching of Environmental Science	Teachers and Teacher Educators and	17-05-2001 to 14-07-2001	-Do-	-Do-	-Do-	18
IV	Teaching of Hindi Language	Teachers, Teacher Educators & Pupils	08-11-2001 to 01-01-2002	-Do-	-Do-	-Do-	16
V	Teaching New Textbook Class I	Teachers, Teacher Educators and Pupils	16-04-2002 to 11-07-2002	Tuesday, Wednes-day & Thursday	12 30 P.M. to 1 00 P M	30 minutes	38

four DPEP districts and all walks of life of the teachers

Tools of Enquiry

A questionnaire-cum-opinionnaire was developed for the study with the help of experts in the field The opinionnaire contained questions based on information, knowledge about *Gyankalash* programme, the respondent's opinion about the programme and suggestions for improvement of the programme. A break up of the different thrust areas of questions is given below in Table III.

Apart from above said opinionnaire other inadvertent modes of data collection were also used like

- The in-built feedback mechanism of answering questions in 100 words
- Responses to questions at the end of each episode.
- Teachers' interviews for best responses.
- Publishing the question-answers in Giri Raj magazine under *Gyansurbhi.*
- Discussions in monthly CRC meetings.
- Work shop on evaluation of programme
- Broadcasting and enhancing interactions
- Phone-in programmes
- Audio-conferencing.

Table 3
Description of Tools

S. No	*Type*	*Question Number*	*No of Questions*
1	General Knowledge about *Gyankalash*	1, 2	2
2	Phases and Contents	3, 4 (a)	2
3	Duration	4 (b, c, d)	3 parts
4	Prior information about *Gyankalash* episodes	5	1
5	Objectives	6	1
6	Theme/Thrust areas	7, 8	2
7	Use in teaching learning process	9	1
8	Orientation of *Gyankalash*	10	1
9	Queries/Questions for *Gyankalash*	11, 12	2
10	Opinion on its repetition and recording	13	1
11.	Assessing *Gyankalash*	14, 16, 17	3
12	Informing pupils	15	1
13	Availability of infrastructure facilities	18	1
14	Suggestions for improving *Gyankalash*	19	1
15.	Other relevant response about *Gyankalash*		

- Sharing field teachers' experiences on radio
- Opinion on various aspects of programmes
- Suggestions for the improvement of programme

Some discussions were also held in various meetings, workshops and even State Resource Group of DEP meetings on *Gyankalash*. These group discussions helped in verifying the information collected or even reinforcing the data collected

Data Analysis

After computerising the responses, the percentage of responses for each alternative were obtained. Views of the listners of the programmes were also analysed from various letters or responses received from the audeience in different phases of the programme, question-answer episodes and group discussions with audience. The data was entered, matrix was prepared and prints were taken The data prints were cross-checked by checking the original responses randomly.

Major Findings

1. *Gyankalash* emerged as a popular programme not only among the DPEP primary school teachers but also among non-DPEP districts as reflected in their letters and responses. Teachers of primary schools of DPEP districts of Himachal Pradesh were found regularly listening to the episodes of *Gyankalash*.
2. Teachers had a prior knowledge of the objectives, phases and the different aspects of the programmes. This was evident from the responses of the teachers to various parts of the questionnaire.
3. Active learners expressed their interest in the programme by regularly sending their responses to All India Radio (AIR) on the questions asked in *Gyankalash* episodes.
4. Participants gained academically as revealed through informal feedback, formal responses and the questions posed Teachers were found to be benefitted from teaching of concepts in different ways as *Gyankalash* helped them to take a fresh look at the content Creativity in terms of self-written poems, activities, innovative teaching games were also observed as an impact of the *Gyankalash* episodes. *Gyankalash* was considered an innovative orientation-cum-training strategy which helped in community sensitisation on educational issues.
5. Some primary teachers felt that these programmes acted as catalyst and inspiring factors as they helped them use innovative techniques in their classroom transactions. Teachers were found to use more Teaching Learning Materials and make their teaching "activity based" as a result of listening to these episodes of *Gyankalash*. The radio lessons were found informative and supplemented the classroom teaching as indicated in the response to questions.

6 Format used for presentation of radio programmes in *Gyankalash* were said to be suitable, the language comprehendable The contents were updated as was observed by the audience.

7. Teachers took active interest in *Gyankalash* programme. It was traced from their involvement in the episodes, responses to questions asked, involving students to listening *Gyankalash* and also asking their family members to record episodes which they, at times, were not able to listen. Poems, songs along with music were well appreciated by the teachers These were found to be stimulative and meaningful.

8 Teachers found the training provided in its five phases useful, satisfactory and which upgraded their competencies.

9 Most of the respondents rated *Gyankalash* as good/excellent. None rated *Gyankalash* below average

10 The best part of *Gyankalash* was found to be "school readiness" episodes followed by its delivery mechanism. Presentation style, quiz were also appreciated in *Gyankalash* as they motivated the children.

11. Teachers want the following changes to be made in the programme for its improvement:

- the duration should be raised
- the frequency of broadcast should be increased.
- the written material on the episodes should be sent in advance.
- model lessons should be presented
- audio/video record players should be provided to each school.
- the audio players/radio sets should be maintained properly
- the programme may be repeated in the evening also.
- there should be clarity in presentation Professional presenters may be invited.

12. Teachers gave some more suggestions:

(a) The programmes may be supplemented with video recordings and shown to teachers.

(b) New innovative ways should be found as delivery mechanism.

(c) The *Gyankalash* episodes should be discussed among teachers in their regular meetings.

Suggestions

Based on the above findings and various observations made during the study, the following suggestions could help in better utilization of *Gyankalash* programme in particular and replication of similar programmes in other situations.

(i) Radio is a powerful communication medium and its potentials must be utilised not only for orientations and training in different educational sectors

(ii) Radio could be exploited for breaking the geographical barriers and used for different kind of educational purpose with a minimum cost.

(iii) The radio lessons used for educational purposes should be well planned as per needs of the target listeners. In case they are meant for teachers/pupils, the listeners should be well informed with proper time table, pre-post broadcast activity, and the way these lessons have to be incorporated into the teaching-learning process

(iv) The regular listening of the educational episodes needs to be ensured through regular monitoring mechanism

(v) The RCCP must be made available/ accessible to the audience with regular maintenance.

(vi) Incentives should be attached to listening and proper evaluation mechanism of such programmes should be evolved to make them more effective and motivational

(vii) Continuous and comprehensive evaluation mechanism must be evolved with each such programme

(viii) Pedagogic value of radio needs to be utilised to its fullest potential.

(ix) There should be a good montage or beginning of the programme with pleasant music/poem/song so that it enables to arouse interest of the audience.

(x) There may be orientation of the listeners along with periodic meetings at local level to interact and make programme more effective as well as need based. Such meetings may help in getting feedback by listening to their problems and suggestions

(xi) There should be a provision for replication of the programmes. Some revision episodes based on 5-6 episodes be also broadcast.

(xii) Such programmes should be developed over a period and broadcast at local levels through the FM stations to meet the local demand.

(xiii) The radio programmes should be integrated into curriculum in addition to being complementary or supplementary.

(xiv) Duration of a programme should be approximately 30 minutes with a frequency of twice or thrice a week.

(xv) The programmes should be of professional standards.

Policy Implications

The findings of the study and suggestions have a lot of bearing not only on teachers or teacher educators but also on the policy framers. Some of the policy implications of this study could be as given below:

1. Due to its easy access, low cost and high pedagogic potentials in breaking the geographic barriers the possibilities must be explored to use

radio as a supplementary and complementary medium in education for orientation, training and teaching

2 Due to its relative easy production and high enrichment value in learning, radio could be used for curriculum transaction at the primary level

3. Possibility be explored to use radio as a distance learning medium for those who could not be brought into the mainstream at the primary and upper primary levels. This could help in implementing the government programmes of *Education Guarantee Scheme* and *Sarva Shiksha Abhiyan.*

4 Radio could be used as a powerful medium for taking education/literacy to the migrant populations, small and discrete hutments, tribal or other nomad groups.

5. Local FM channels need to be developed for educational purpose at the primary/upper primary levels. This could cater to the local needsa of teachers, pupils specially the disadvantaged and challenged students

6 Programmes may also be developed on Gender Sensitisation, Women Empowerment, Environment Education, Human Rights, Consumer Education, etc. These could be regularly broadcast as educational programmes and serve as tool for lifelong education.

7. Guidance/Counselling to help teachers, pupils and parents may also be introduced.

8. Developing radio lessons may help the teachers to earn some credits which could help in their promotions/increments/trainings. They may slowly become experts in radio lesson It may be mandatory and teachers may listen to them and also make use of them on a regular basis

9 All the primary schools must be provided with RCCPs. A regular grant for their maintenance including meeting the cost of cells, battery etc. may be given

10 Thematic as well as contextual issues must be addressed to through regular radio broadcasts Issues of national importance could also be broadcast in between

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Education of the Muslim Girls: Strategies to Overcome the Problems

S.A Shaffi*
S C Chauhan**
Laxmidhar Behera**

Muslims are identified as educationally backward in India by the High Level Committee on Minorities and Weaker Sections headed by Gopal Singh Muslim girls are more backward as far as their education and literacy rate is concerned The Government and Non-Government organisations should work collaboratively and parents and the community should cooperate with the above organisations for universalisation of education of muslims

The entire globe is experiencing an economic crisis. Perhaps this is the main cause for the present school education scenario To overcome this situation, some innovative programmes including stipend and other support programme should be amalgamated to retain the students in school education and to enhance enrolment. Hence very few students are enrolling in secondary and higher secondary stage. Subsequently this kind of problem will have a significant impact on human resource requirements at higher stage and will accelerate the expected progress or growth of the society in particular and country in general

After Independence, efforts have been made to universalise elementary education in pursuance of Article 45 of the Constitution of India. Education for All (EFA) programmes have been launched to ensure universalisation of primary education.

The National Policy on Education (1986) stressed for the centrally sponsored scheme to introduce Science, Mathematics, English and Hindi on voluntary basis in traditional institutions. The objective of this scheme

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* Professor ** Lecturers, Department of Education of Groups with Special Needs (DEGSN), NCERT, Sri Aurobindo Marg, New Delhi-110 016

is to promote traditional institutions like Maktabs and Madrasas with Science, Mathematics, Social Studies, Hindi and English in their curriculum and also to provide financial help. This scheme will provide opportunities to acquire education that is compatible to the national education system

The National Policy on Education, which guides educational development, is considered a breakthrough in addressing gender issues. The Policy says, "The National Education system will play a positive interventional role in the empowerment of women." It also will foster the development of new values through registered curricula, text books, the training and orientation of teachers, decision makers and administrators and the active involvement of educational institutions The removal of women's illiteracy and obstacles inhabiting their access to, and retention in, elementary education will receive overriding priority. It states "as the women literacy and girls education is lowest among educationally backward minorities, in the schemes of opening of girls schools, appointment of lady teachers, opening of girls hostels and providing of incentives in the form of mid day meals, uniforms etc. minorities' needs should be fully met. A production cum training centers for crafts exclusively for girls preferably with women instructors to the extent possible in each of the identified minority concentrated districts. This will be done by state governments" (NPE, 1986).

The Prime Minister's 15 Point Programme for Welfare of Minorities was launched in May, 1983. Regarding the educational conditions of muslims the revised 15 Point programmes emphasized to put concerted efforts for achieving 100% enrolment of girls at secondary and higher level Necessary pre-requisite such as providing user friendly text books making curriculum relevant to day to day life, making the time flexible and gender sensitive facilities are given importance in the revised proforma for welfare of minorities in general and of muslim women in particular.

A commitment by the Government of India to provide free and compulsory education for all children upto the age of fourteen through its constitution gained momentum after NPE 1986 and POA 1992 The global declaration on Education for All (EFA) adopted in Jomtein 1990 gave a further fillip to the national commitment for providing basic aspects within the country felt the need for viewing basic education as fundamental right to each and every citizen of the country. In India the Basic education is considered as the key for sustainable socio-economic development, peace and stability within and among countries and a categorical statement within the Dakar Framework for Action The country has been making concerted efforts to achieve EFA goals including to provide basic education for all by 2010 through its mission mode programme of *Sarve Shikha Abhiyan* (SSA).

General Problems of Education of Women

Female Education was considered less important than male and very inadequate provisions were made for its development during the Moghul Period. The royal family women during the

Turco-Afghan Rule were given private tuitions to teach arts and crafts (Yusuf, 1959) Quassim Emin demanded better education for women as it is indispensable and a means to overcome the economic misery as the former factor contributing the low status of women

The *National Curriculum Framework for School Education-2000* (NCFSE) emphasises for making education accessible to more and more girls, especially rural girls, removing all gender discrimination and gender bias in school curriculum, text books and the process of transaction The girls belonging to the scheduled castes, scheduled tribes and minority are disadvantaged So adequate attention is to be paid and facilities to be provided for education of these groups The negative attitude of teachers, parents and community towards girl child and girls of disadvantaged sections must be changed. Education must be taken as a constitutional right for their empowerment The framework affirmed the need to develop and generate inclusive and gender sensitive curricular strategies to nurture a generation of girls and boys who are equally competent and are sensitive to one another, and grow up in a caring and sharing mode as equal and note as adversaries.

Problems of Education of Muslim Girls

Education helps to acquire knowledge and Islam never ordained against the education of women Islam believes that education is a useful accessory to make good muslim Enriched knowledge would be an assest for both the sexes as it sharpens rational faculties along with physical ones and it further promotes to reach the higher planes of spiritualism. Acquired knowledge helps to differentiate the good from evil including the path to reach heaven and guiding to happiness. Since moral education has occupied an important place in Islam Although Prophet Mohammad favoured Education for women but the objectives of Quran are totally ignored Many vital principles of Islam including education for girls are misinterpreted and thought it as an unnecessary step. The Muslim sector perhaps the most educationally backward community of the country, in the present times a situation that has been created due to the misunderstanding of the principles of the holy book. Lack of education made muslim women inferior to men and subsequently their status became low

Researches in the area of education of Muslim women revealed their low educational status in different parts of the country InduKumar (1976) in her study found low educational facilities and educational status of Muslim Women in Kerala. Similarly Rajwade's (1980) study revealed low status of Muslim women of Madhya Pradesh in comparision to other communities. Mandal (1992) found low literacy of Muslim women in his sampled areas of rural West Bengal.

Though the Government is very considerate towards Muslim girls education (free concessions, scholarships, seat reservation) the number of literate girls is still less when compared with women belonging to other communities The parental attitude, the influence of veil or seclusion, early marriages and school location are perhaps few factors that hinder educational progress of muslim girls Among other major barriers cultural taboos, resistance to co-education classes, teacher absentism, lack of female teachers are helping in growth of illiteracy among muslim girls.

Growth of Literacy after Independence

On time and again the Literacy rates have registered an increase in India In 1951 the total literacy rate was only 16 67% which rose to 52.21% in 1991. The total literacy rate in India was 62% in 1997 i.e 73% for males and 50% for females. However, the literacy rates in rural and urban were 56% and 80% respectively. Though the disparity between male and female, urban and rural literacy rate exists but it has substantially reduced over the years.

According to the 2001 census, the literacy rate has gone upto 65.38% out of which 75.85% in males and 54 16% in females The number of illiterates decreased by 31.9 millions for the first time, on the other hand the number of literates has increased by 203.6 millions in the last decade. At present, over three-fourth of the male population and over half of the female population is literate. In the last decade the female literacy rate has increased by 14,87% as against 11 72% for the males. Thus the gap between male and female literacy rates narrowed to 21 7% in 2001 than 24.84% in 1991. The entire country has registered an increase in literacy rates of both males/ females.

The adult literacy rate in 1991 was 48.54% out of which 61 89% and 34.09 for males and females respectively. The literacy rate increased to 57% in 1998. In 1998 the literacy rates for adult males and females rose upto 70% an 44% respectively

One can notice large regional and gender disparities in the growth of literacy. According to the provisional results of Census of India (2001) The lowest literacy rate (30 01%) was reported from Dantewada of Chattisgarh and the highest literacy rate was reported from Aizawal district of Mizoram (96.6%). Around 81 districts have lower literacy (below 50%) rate and 297 districts have lower literacy rates than the national average of 65.38% on the other hand more than 59 districts have about 80% literacy rates. Majority districts in Kerala and Mizoram have 80% literacy rate While in Bihar, M P., Rajasthan and U P., 57 districts have lower than 50% literacy rate. Bihar's Kishanganj has the lowest female literacy rate (18 49%) while Aizwal district of Mizoram has the highest female literacy rate in the country (96.06%).

In about 253 districts, the female literacy rate is lower than 50% and in 313 districts it is lower than the national average of 54 16%. About 11 districts male-female differential in literacy rate is lower than 5% points, and most of these districts are in Kerala and Mizoram. The maximum male-female differential in literacy rate is recorded in Sawai-Madhopur District (41 3%) in Rajasthan In about 100 districts the male-female differential in literacy rate is above 30% points as against 222 districts having a differential of more than 25% points. The census data on education and on socio-economic status is not cross tabulated on the parameter of religion But assessment of the situation of education of muslim women can be made on the basis of some sample surveys conducted on localized basis. The study by Abeda Seminddin (1997) can be mentioned here According to her survey, literacy rate of muslims women was less than women of other communities Even literacy rate of urban muslim women comes to 40 1% and that of rural muslim women 23.9% Similarly the survey conducted by Hamdard Education Society shows the clear picture about low literacy status of muslim women. The survey puts literacy figure amongst muslim females in Kishanganj (Bihar) and Dilwara (Rajasthan) as 22% and 12% respectively

The literacy status and levels of education among the Muslim women is very low. From the study of Mandal (1992) it is revealed that in the six villages (sampled area) of West Bengal the literacy rate of the Muslim women is only 22.89 per cent Among the literate women, 68.27 per cent have education upto primary level, 27.63 per cent upto secondary level, 3 35 per cent upto Madhyamik Level and only 0.75 per cent upto graduate level

The Indian Constitution is a very enlightened constitution and accords women equal status with men. But in reality women do not enjoy equal status Government has taken so many initiatives for educational empowerment of women in general and muslim in particular. While government action and steps are necessary to provide social justice and remove inequalities they can became effective only if society/ community's attitudes and outlook change for this social action is most important

Strategies to overcome Problems

- **Social Taboos**: Blind belief, superstitions and social taboos are major obstacle to modernisation. Due to these some parents are not interested to send their children to institutions where modern subjects are taught They send them to traditional institutions. In the modernisation of Madrasa education scheme launched by the central government in the year 1994 has given adequate emphasis on teaching of modern subjects like science, mathematics, social studies and English in traditional Maktabs and Madrasas.
- **Attitudinal Problems** Attitude is the innate disposition or feeling towards a group of people or an object In a diverse country like ours, people may show negative attitude towards other communities Studies revealed that even parents show a biased behaviour towards their daughters. So the need of the hour is awareness generation. For achieving universalisation of primary education adequate emphasis must be given on

girls education and education of girls of weaker sections and minorities in particular. The media, newspaper should play active role in creating a conducive atmosphere.

- **Distance of Schools:** One of the obstacles on the way of universalisation of elementary education is distance of school from home

Suggestions for betterment of education of Muslim Girls

- Voting rights should be given to those parents whose children are in school or literate and this should be strictly legalized in the best interest of the community and the country
- The government through its schemes should finance the education of the girl child practically to enhance the literacy rate
- Feedback mechanism/monitoring system should be transparent, time bound and democratic to achieve the target if not to renovate to fulfill the constitutional obligations
- Parents/guardians/administrators/planners/teacher educators should be made to cooperate with the people of the programme by that a kind of warfoot awareness should be created for 100% success.
- Appointment of adequate number of lady teachers to enhance the confidence of students/parents to boost enrolment.
- Introduction of appropriate vocational courses in government polytechnics as well as at higher secondary level based on local resources and demands
- In minority concentrated areas programmes may be arranged to provide quality education, like Kasturba Gandhi Shiksya Yojana.
- Residential/ hostel provision particularly for girl child to stay during the course studies like Ashram schools.
- Without the country data, it will be difficult to innovate the present school education scenario, hence such studies should be given priority.
- Separate budget allocation for minority girl child education in particular and minority education in general should find a place in our five year plans.
- The scheme may be implemented for payment of scholarship of girls students based on merit-cum-means
- Admission to girl students in technical and professional courses may be encouraged by providing suitable package of incentives

Conclusion

It is not only the responsibility of government but also the non-government organisations and community members to enhance growth of enrolment of girls. The community should move forward for education of girl children. The NGOs through their awareness campaigns ensure that there is maximum participation of women from backward and deprived communities for universalisation of elementary education. Parents should also not as a link to update themselves with the trends in the globe.

The need is to orient the school administrators and planners in a special way for monitoring of student mobility and to put a check on drop out rate A special campaign is also to be innovated to attract the girl child from home to school to promote the girl child education and literacy rate.

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PROFILE

Sarvepalli Radhakrishnan

"HE was gentle. Elements blend in him that the Nature would raise and say, 'This is a Man" This anonymous saying would be much befitting to the philosopher king, Dr. Radhakrishnan, who began his career as a simple teacher to raise to be an academician of par excellence and occupied the highest office in India Comments from the Mathematician and philosopher, Bertrand Russell could be the towering one when he said, " *It is an honour to philosophy that Dr. Radhakrishnan should be the president of India and I, as a philosopher take special pleasure in this Plato aspired for philosopher to become king and it is a tribute to India that should make a philosopher president.*"

Born in a middle class family at the border between Andhra Pradesh and Tamil Nadu in 1888, Radhakrishnan took serious interest in schooling though financial contrains of the family posed problems. After completing his schooling from Lutheran Mission High School at Tirupati, the famous abode of Lord Venkateshwara, he joined the Voorhees College at Vellore to take a Fellow of Arts (F A). As was the practice of early marriages, he got married with his cousin (as this too was common) Sivakamamma. He joined the Madras Christian College for his higher studies for his B A. and M.A. degrees Undecided and unclear about the course to study and career to choose, he was guided by the book which was given to him by his cousin who was his senior in the college The books were Stout's Psychology, Walton's Logic and Mackenzie's Ethics. His wavering mind took a firm decision to choose philosophy as the main subject of his studies A serious and promising student, his quest for intellectual curiosity was insatiable and he read voraciously. The only other thing he did was praying to God. He claimed, "That faith (in God) never deserted me through thick and thin, and even today it is that which sustains me in varied action which I am called upon to undertake ."

During his study at Madras Christian College, he came under the influence of Professor Aallred Hogg, who disagreed with the view and attitude of many of his colleages that Christianity is the only rational religion. As part of his M.A. course, Radhakrishnan wrote a dessertation on the *Ethics of Vedanta* at age of twenty. This was an attempt to reply the critiques levelled by his teachers that Hinduism in general and Advaita Vedanta in particular provide no firm basis for practice conduct

In the year 1909 he passed out his M.A. and joined the Presidency College, Madras where he lectured to the

Intermediate, B A , B A , (Hons) and M A. students He joined the Teachers' College, Saidapet for the Licentiate in Teaching (L.T) in order to qualify for a permanent post of Assistance Professor He was exempted from attending classes of Psychology as he was teaching in the college In the year 1911 his article "the Ethics of the Bhagavatgita and Kant" was published in the International Journal of Ethics which attracted the attention of Bal Gangadhar Tilak

His first encounter with Gandhi was in 1915 when Gandhi returned from South Africa and was emerging as the leader of the Congress and an advocate of mass participation in Indian politics. The meeting was very interesting one in his own words,

Gandhi said to me: Don't drink milk, which is the essence of beef.

I replied. In that case we are all cannibals. For we drink our mother's milk, which is the essence of human flesh The conversation then turned to medical refusal

Gandhi· Thousands of birth take place in jungle. They do not need any medical attention.

I said· Thousands die in the jungle too.

How do you know?

How do you know?

Natesan, who was a common friend intervened and said to Gandhiji: 'Don't you know he is a Professor of Logic?'

His book , *the Philosophy of Rabindranath Tagore* was published in 1918 in which Radhakrishnan described Tagore, " Tagore's supreme spirit is a not an abstract entity residing at a safe distance from the world, but is the concrete, dynamic life at the centre of things, giving rise to the road of the wind and surf of the sea.". Tagore later complimented him for his "marvelous gift of speech and originality of thoughts" In 1916 Radhakrishanan shifted to the University of Mysore as professor of Philosophy in the Maharaja's college where he was popular *not only among students but also among teachers for his unassuming simple habits, the characteristics patience with which he listened to everyone, and for his sparkling wit and humour* .

His sojourn in Calcutta was in a way most productive period of his life. His monumental work, *Indian Philosophy*, Volume I was published in 1923 and George Allen and Unwin, London published second volume of the same. The impact of the book was so immense that the fourteenth edition of the Encyclopedia Britannica asked Dr. Radhakrishnan to write an entry on *Indian Philosophy*. His *Indian Philosophy* paved way for the establishment of Philosophical Congress as a platform for philosophers at the national level The first session of the Congress held in Calcutta in December in the same year was presided over by him

Radhakrishnan was invited to give lectures in various forums in the United Kingdom and was elected as the Upton Lecturer at Manchester College, Oxford for the year 1926. In the USA, the University of Chicago elected him as the Haskell Lecturer in Comparative Religion for the same year His lecture at the Manchester College on 'the Hindu View of Life', which was delivered with out a scrap of a note to assist him, pulled people and scholars to him.

He served as the Vice Chancellor of the Andhra Pradesh University from 1931-36 and the Banaras Hindu University (BHU) from 1939-48 This was the period that his academic as well as the administrative mettle were proved to be the best and the universities felt their best of their times. He gave equal weightages to teaching and advanced research in the universities. He believed that research was the basis for efficient teaching while appreciating teachers who excelled in their academic pursuits On the first day of assuming office of the Vice Chancellor at BHU, he was requested to deliver a lecture on the Gita by Pandit Malavya and other students which he agreed

He, as a Vice Chancellor realised the two duties - one to see that the standards of teaching and research to be kept high and the other to ensure that the administration was prompt, clean and just He, with his strict binding on expenditure reduced the unplanned extra expenditure. The Silver Jubilee of Banaras Hindu University was celebrated in 1942 with Mahatma Gandhi as the chief guest and Rajendra Prasad, Jawaharlal Nehru, and Jugal Kishore Birla, Syama Prasad Mookerjee, Smt. Vijay Lakshmi Pandit as special invitees. Gandhiji in his speech mentioned, *"Malavyajis and Radhakrishnans are rare and the thousands can not achieve what they have done"* During his three terms as Vice Chancellor, the University witnessed tremendous progress many departments were opened, unplanned extra expenditure was reduced and turbulent period and strikes were amicably brought down

In 1947 when the British decided to leave India, a Constituent Assembly was set up to decide the constitution of independent India, Radhakrishnan was one of the representatives from Uttar Pradesh. Though he could not attend regularly the meetings of the constituent assembly due to his participation in the UNESCO conferences, his assignment at the Oxford University and with the pre occupation with the Education Commission, he dominated the members by his eloquent and provocative speeches.

When Jawaharlal Nehru wanted higher education of the country to be embedded with values and character building mission, he found Radha krishnan to be the chairman of the University Education Commission which he accepted with all sincerity and commitment The purpose of education, the Commission's report said, 'is to lead us from darkness to light, to free us from every kind of domination except of that reason......to free as from shackles of ignorance, prejudice and unfounded beliefs " It emphasized the importance of inter-disciplinary studies and upheld the view that "the divisions of subjects into Science, Social Science and Humanities are not exclusively It will be wrong to assume that science is amoral or in difference to values. Science is not to be taught something external to man. It is one of the greatest of the creations of the human spirit. Its aim is not only to utility or success but the pursuance of truth."

Nehru chose Radhakrishnan to be the successor of Smt. Vijay Laxmi Pandit to be the Ambassador of Soviet Union. Nehru said, "this sending of Radhakrishnan to Moscow is rather an interesting experiment. I am more and more giving to be the opinion that we should speak a little more the language of India in foreign countries, i.e. to say the language of the Indian mind It may seem odd to others but it should make them think a little and realise that India is not just a copy of the west" On reaching Moscow on 14 January 1950. Radhakrishnan received a message from Kremlin that Stalin wanted to meet him the same day and it was very unusual as Stalin met very few diplomats. Keeping in view of Radhakrishnan's habit of going to bed early his meeting with Stalin was fixed at 9.00 p.m., instead of at mid night, the usual time as given to diplomats and others for audience with him The meeting Radhakrishnan addressed Stalin as Marshal and by Stalin as Professor, not contemptuously but with a view deference to his learning and wisdom. The first question Dr Radhakrishnan asked Stalin was "Mr. Chairman, Sir, Why it is so difficult to meet you" Stalin smiled and replied "Is it difficult to meet me? You are meeting me now". Stalin took seriously whatever Radhakrishnan said about Indo-Soviet relation When Radhakrishnan was nominated to the post of Vice President of India and left Soviet Union, Stalin said "You are the first person to treat me a human being and not as a monster. You are leaving now. I am sad. I want you to live long. I have not long to live". Stalin bade him farewell with moister in his eyes Such a show of emotion by Stalin was unprecedented.

As the Vice President of India and the chairman of the Rajya Sabha, he conducted the business of Rajya Sabha with dignity and regulations, keeping all sections cool Jawaharlal Nehru remarked "You have made this house with yourself as chairman a unique place and converted it into a large family under your guidance" He visited far and wide during his vice presidentship. He was the first Asian to be elected as president of the 7th session of the UNESCO General Conference held in October, 1952 He, in his thanking address remarked, "It is essential . that we should will not merely peace, but the conditions that are essential for securing peace .. No man can attain happiness in this world if he feels hungry or cold, if he is a slave to other men, if he is surrounded by filth and disease, and if he does not have some leisure for recreation, for reflection.' His addresses and speeches in the UNESCO Conferences were always taken seriously as the voice of the developing countries He always wanted UNESCO to stand beyond the political divisions. It was due to his influence that UNESCO undertook a project for "an Objective study of World Religions"

In the year 1962 he was elected to the highest office in India and assumed office as the President of India.. He concentrated on India's development. During the Chinese aggression Radhakrishnan boosted the morale the countrymen and army by his inspiring speeches.

The Vatican awarded him the highest honour for the Head of a State as a Knight of the Golden Army of Angles His long and varied carrier came to an end in 17th April, 1975. One leading daily described him, "Very few leaders of modern India combined scholarship and statesmanship displayed by Dr. Radhakrishnan."

Academic Editor

Book Review

Education for All IS THE WORLD ON TRACK? EFA Global Monitoring Report UNESCO Publishing 2002 Paris P 310 Unpriced

Monitoring of Education for All (EFA) is no small task even at the national level in countries like India Many countries seldom do the business Monitoring the very aim of extending (primary) education to all was an outcome of global initiative by the UNESCO. That was mooted by the world conference on EFA held in Jomeitin on 1990 and the six major goals of the World Education Forum held in Dakar in 2000. The national governments were sensitised to the cause of education of children, the young people and the adults by the above global initiatives in which the international agencies, NGOs and the countries of the world came closer to eradicate the ill poverty as education is a weapon to fight against poverty A major development at the Dakar Forum was the resolution that all parties should be accountable for their record in meeting the commitments they have made National governments pledged their commitments to securing the goals Maximum efforts have been put in by the national governments, the international agencies in the form of technical and financial support to reach the goals. At this juncture, the UNESCO, which is a major global partner to each country in achieving the goals of EFA, has made an attempt to look back and take stock of the situation and the progress made by every party involved in the mission. This EFA Global Monitoring Report of UNESCO is an outcome of tireless efforts by team of educationist, staticians, technical experts under the leadership of Christopher Colclough. Besides taking stock of the progress made by the countries so far, the report analyses the progress made by each country goal wise and the number of goals achieved by countries and regions with global trends, as also the future possibilities of achieving the number of goals by number of countries and countries which could not be achieving any of the goals

The Report consists of six chapters with a summary and an annex of statistical tables with a technical introduction. As stated in the foreword by the Director-General of UNESCO, Koichiro Matsura, the report charts progress against the six Dakar goals and targets, highlights effective policies and strategies, and alerts the global community to emerging challenges for action and cooperation.

Chapter one of the report "Education For All is Development" serves as an introduction to the report by examining the attention need to be paid to the six goals The second chapter, which is the core of the Report, answers the progress towards the goal by evaluating the progress goal wise The chapter three, Planning for EFA presents the challenge of Dakar framework and planning for

HIV/AIDS to combat conflict, disaster and instability, credible planning and credible plans. The chapter four analyses the resource requirements for reaching EFA The chapters five and six address the meeting international commitments (as a response to Dakar), and prospects and opportunities respectively. The annex with a technical introduction provides rich source of data on various aspects of EFA in the countries

The first chapter one 'Education for All is Development', while examining why the EFA goals need such attention, deals with three types of arguments, which are in favour of providing compulsory education for all. The first derives from ideas of human rights. The second, Extreme Work, informs by notions of *individual capacity and capability.* The third perspective concerns the ways in which education helps people and societies to achieve other desired development goals The three arguments are briefly discussed First being education as a human right, quotes from the article 26 A of the Universal Declaration of Human Rights (1948) which declared 'elementary education shall be free and compulsory, and that the higher levels will be equally available to all on the basis of merit. Where the right to education is guaranteed, people's access to an enjoyment as other right is enhanced and the imbalances in life chances are lessened. (P. 30)

The second part of the first chapter discusses education and human capabilities. After a brief analysis of various development theories of west and the east, this part of the chapter devotes almost a page to Nobel laureate, Amartya Sen and his Capability Approach, which defines that development occurs when people are more able to achieve what makes their lives valuable. The objective of development, according to Sen, *should be to promote and expand the freedom that people have to enjoy valuable being and doings.* The 'beings and doings' will vary and would include avoiding illness, being well-nourished, and literate, having self-respect or enjoying relationships and work (P 32)

This section also presents that the process of education which may be instrumental to displacing the negative process. For example, it illustrates compulsory primary education if it is both provided and enforced, will reduce child labour.

Chapter two of the Report takes stock of the progress made towards the Dakar EFA goals It presents goal wise analysis of the progress made The achievement of the first goal *"expanding and improving comprehensive early childhood care and education (ECCE), especially for the most vulnerable and disadvantaged children"*, which has been underscored as the important part of a comprehensive approach to achieving EFA both by the World Declaration on EFA (Jomtein 1990) and the Dakar Framework Action (2000), is analysed in four dimensions the benefits of ECCE, the diversity of areas of learning, data on indicators, patters and provision and trends in participation in ECCE. The chapter reports

However, for most countries around the world, this (ECCE) field is a relatively new and uncharted area of learning. The challenge is a to develop strategies –

formal and informal – that respond to specific socio-cultural and economic contexts, in countries where governments are constrained in their ability to find resources for ECCE. Regretting about the non-availability of data as information about ECCE are in their infancy both at national and international level, the report clearly states how this hinders policy development and assessment of global progress The five Asian countries – Cambodia, Kazakhstan, Kyrgyzstan, Tajikistan and Vietnam are praised for their co-operation to identify and describe types of ECCE and develop common indicators The given figures on participation in early learning shows for number of developing countries, Bahrein, Lesotho, Mongolia, Republic of Moldova, Suriname and Trinidad and Tobago have high participation rates with 20 hours or more per week. Regrettably India has only 37.7 % of children in the age group of 36 - 59 months attending some form of organised ECCE. The trends in participation is not able to be assessed fully when it says, *"To assess progress in ECCE since the World Education Forum in Dakar 2000 is not yet possible " Data at macro level are no more recent than 1999. From the figures given it could be concluded that (i) developing and developed countries alike are expanding ECCE provision (ii) in a number of countries in Eastern Europe and Asia, enrolment in ECCE is falling (iii) a number of countries, mostly sub-Saharan African countries show lower enrolment rates with a lack of progress*

Progress made towards the goal 2, achieving Universal Primary Education is analysed in the second part of the chapter. It begins with a shock, " More than 100 million children in the world are still deprived of access to primary education and all of whom are from developing countries with a majority of girls." The data about Gross Enrolment Ratios (GERs), Net Enrolment Ratios (NERs) by regions up to the year 1999, the variation in GER and NER by regional, classification of countries / territories according to the level of their GER and NER, estimates of primary school enrolment and attendance (1998 –2001) are given.

The analysis of the Goal 3, Learning Needs of all Young People and Adults presents the learning programmes of youths and adults as a world of diversity Arguing that learning should not be restricted to school age, this part of the chapter brings some important programmes of out of school children and young people in select countries A comparative study of Senegal, Guinea, Uganda and Kenya found that adult education programmes are more likely to succeed, if the acquisition of literacy is an integral part of activities designed to improve livelihoods, rather than the other way around. Highlights of the success programmes / stories presented in boxes would help for replication of the programmes.

The Goal 4, Adult Literacy traces the development of adult literacy. The salient points of this section are. (i) past decades saw steady growth of the literate share of the adult world popultion from roughly 70% in 1980, 75% in 1990 to 80% in

2000 (ii) in absolute number in 1980 the world had 870 million illiterates, in 1990 it was 880 and in 2000 in was 860 million and the figure would be around 800 million in 2015. (iii) in 2000, close to two-thirds of all illiterates were female and the gap is closing exasperatingly slow.

At the regional level, the countries of the developing regions –sub Saharan Africa, the Arab States and North Africa, and South and West Asia have made progress, all the more so in the light their high rate of population growth. Illiteracy increased in all three regions during 1990s together accounting to 65% of the globe's illiteracy. In 2000 it was 70% and the year 2015 will see about 80% illiterates of the world in these three regions i e. 207 million in absolute numbers.

At the national level countries with below 50% literacy rate are: Burkina Faso, Mali, Mauritania and Niger Twenty countries fall in the range of 50% – 70% and a number of countries in the range of 70% – 90% and 90% above from all the regions. Expectedly India had the 34% of the world's illiterates in 2000 which will go by one percent more in the year 2015 where the rest of the world leaving the Brazil, Indonesia, Ethiopia, Nigeria, Bangladesh, Pakistan and China has 28% of the illiterate population. All but one (Ethiopia) belong to the E-9 group of high populated countries

In the next section the goal 5 *Gender Equality* is monitered. The progress towards the goal in terms of enrolment in primary education both at global and country level. The GER increased by 3 % from 93.1% in 1990 to 96 5% in 1999, while the boys rate fell slightly from 105.5% to 104%. All developing regions but one (Latin America and the Caribbean, where gender parity is almost a reality, GPI = 0.98) experience improvement in girls' enrolment.

The country level gender parity index (GPI), GER in primary school are given which show nearly two-third of the ninety-two countries for which data were available, girls improved their situation in enrolment; eleven countries experience a decline in their GPI; in twenty five countries, the GPI remained unchanged over the period The Report then goes on to present the access issues in three dimension viz. Disparities in access favour of boys, gender parity, disparities in access favour of girls. Under the section *Learning Process*, the chapter deals with repetition rates, survival up to Grade 5. It concludes: (i) in almost all the regions boys are more likely to drop out and in a number of countries access to schooling is in favour of girls (ii) countries where girls have very low access and could not complete school less than boys (iii) overall evidence suggests that although boys are more likely to be enrolled in school, girls are more likely to stay there until Grade 5. The section under *Secondary Education* provides the status of the progress towards gender parity in secondary education

The section *Teachers in Primary Education* discusses the proportion of women among the teaching staff in school. The women teachers in 1999 in the regions are: (i) Sub-Saharan Africa has the highest number of countries where women represent less than half of the teachers staff i e. the lowest share of women teachers. (ii) the Latin America and Caribbean have predominantly women as primary teachers (iii) in Arab states women represent one-half or more of the teachers in two thirds, of the countries for which the data are available, ranging from 20% in Yemen to 75% in Qatar (iv) Asia and the Pacific, has both lowest as well as the maximum values.

The next section takes the Goal 6 Education Quality for vivid discussion In finding the definition of education quality, it provides the flow chart table input - process – outcomes. The inputs includes. (i) the school (Curriculum content, textbook and learning materials, teacher qualification, training, morale, commitment, etc) (ii) Student characteristics (aptitude ability, perseverance / commitment, nutrition and health, School readiness, attended ECCE, Gender, etc.) (iii) Household / community characteristics,. The process includes (i) school climate and (ii) teaching and learning. The outcomes includes (i) achievement, (ii) attainment and (iii)standards

The last section of the chapter, which is perhaps the core of the Report itself, is the assessment of the goals achieved by the countries. Titled as **Is the World on Track?**, this section first presents the methodology for the assessment of the three of the six goals, viz. universal primary education (UPE), adult literacy and gender equality and the concluding part presents the overall assessment of the world's progress towards the meeting them. The methodology followed for the assessment is interesting and it may not be exact figures as the exactness is not ascertained in many cases. Any country occupies a certain position in relation to each of the Dakar Goal *it may have reached the goal already, or be close to it or far away;* this will be called the static dimension. Any country is also located in a certain trajectory in relation to each goal, moving towards it or away from it; this is termed the dynamic dimension The two dimension are integrated and compared on the basis of explicit criteria, forming a matrix of four quadrants. The four Quartrants are: Quadrant I – countries that are at risk of not achieving the goals', Quadrant II - countries close to the goals and moving closer. Quadrant III· low chance of achieving the goals and Quadrant IV · serious risk of not achieving the goals. It would be of some light for reader how the countries found their place in the Quadrant.

Presented in colour the analysis of the countries placed in each Quadrant, the framework gives the assessment of three goals, UPE, in reference to NER, Adult Literacy, gender equity. The last section of the chapter brings some conclusion about overall progress world wise. This part also provides assessment of Dakar goal achievement by region and by population. By making a strong statement, the results of this analysis indicate that **the world is not yet on track,** the report cautions, almost one-third of world population live in countries where achieving the goals set out in the Dakar Framework for Action will remain a dream unless strong and concerted effort is made to reverse the observed trends Countries in the regions of South and West Asia, Sub-Saharan Africa and the Arab States and North Africa are hardly even moving in the right direction at present and there is a high risk that they will not be able to achieve the goals by 2015 The populous countries in East Asia and Pacific are making some progress, but will not achieve the goal without intensified effort

The next chapter, Planning for EFA addresses the basic question 'Is the planning challenge being met? Reaffirming that the realization of EFA requires sustained political support, realistic choices about the allocation of scarce resources, and an environment that enables people to engage in an inclusive process of making plans and taking decision, this chapter presents the sad state of planning for EFA at the national levels. Only 22 countries (2 from Arab states, 6 from Asia, 3 from Caribbean, 11 from sub-Saharan Africa) have either indicated their completion or intention to finalise a national Plan of Action for EFA by the end of 2002 The legislative provision by enacting laws by more than 55 of the countries set an essential basis for strengthening the right to education and creating a platform on which EFA planning can build, says the Report

The Report further provides the state of planning frameworks, budgetary allocation for EFA, civil society and planning for EFA, planning for HIV/AIDS, planning to combat conflict, disaster and instability. These all have been discussed and presented with illustrations of country plans. The section under *Credible Planning, Credible Plans* analyses the six factors which are seen as critical facets of planning for EFA by governments NGOs and funding agencies

The UNESCO guidelines for preparing EFA Plan (2001) and the office in Bangkok EFA planning Guide for South and East Asia which incorporates a projection model (UNESCO – PROAP 2001) are found mentions to give insight for the nations to keep in mind for future planning. The Guide argues that *the EFA plan should not be an additional plan to already existing plans Instead, the EFA plan should be a framework in the form of a large programme, integrating in a coherent way all EFA aspects of all other presently valid plans and policy documents.* The figure 3.1 explains relationship between EFA plans and other plans on strategic instruments, including EFA related activities how an EFA plan should integrate all the existing and proposed programme activities of EFA.

The chapter four, *Resources for Achieving EFA* in the first part after glancing through the studies on EFA cost studies conducted at various levels and various countries by various researcher and agencies concludes that all attempts to assess the costs of achieving UPE must be carried out on a country-by-country basis. The World Bank study (which the report assumes to be more comprehensive) investigated the financial characteristics of 51 countries that have provided the necessary data, distinguishing ten 'high performing countries'. The authors found that these countries

- devote a higher share of national resources to public primary education (1 7% of GDP compared with the sample average of 1 4% of GDP);

- exhibit approximately average unit costs (spending the equivalent of 12% of per capita GDP per public primary student, compared with 13% in the full sample);
- have teacher pay levels which are similar to other groups (spending 3.6 times per capita GDP per teacher),
- spend slightly more of their recurrent budget on non-salary items than other country groups,
- have pupil-teacher ratios of about 40:1; and
- have much lower repetition rates than any of the other groups (8 2% compared with a sample average of 17%)

The sections under *Gender targets* and the demand for schooling, the costs to education of HIV/AIDS. The section on HIV/AIDS looks into the impact of HIV/AIDS on resources availability for EFA, HIV/AIDS cost implications for learners; HIV/AIDS cost implications for educators, cost implications of adjusting education programmes to HIV/AIDS; and cost implications of the education management response to HIV/AIDS.

The next section, *Education in Emergencies* covers definition of emergency Education, its dimensions, resource requirements for emerging education, community participants, etc The last part of this chapter 'How much is really needed to achieve EFA'? tells researchers the required expenditure for various aspects of EFA listed in the chapter, viz. estimation for UPE, girls education, HIV/AID, countries in emergencies

The fifth chapter, Meeting International Commitments, *the response to Dakar* speaks of the aids flow to EFA in developing countries, bilateral aid to education, multi-lateral and to education, World Bank assistance and the total aid flows to education as the EFA goals – The World Bank stands as one of the major providers of concessional finance to education during 1990 The recent international initiatives (announced since the Dakar), are listed out The World Bank's Fast Track Initiative (FTI) would cover the eighteen low income and low enrolment countries each of which had a Poverty Reducting Strategy Paper (PRSP) as recipients for early external assistance in achieving the education millennium development goals (MDGs) The figure 5.4 on page depits the global initiative from country context to international development partness

Initiatives for international coordination by UNESCO, UNICEF for achieving the goals of EFA found a mention in the last part of chapter. The section titled, *Comprehensive Strategy for EFA* (2001) presents the EFA working group as a reference guide to the essential document of EFA. The EFA Flagship programmes by various international agencies have also been described with the name of the panthers, goals, strategies and activities and achievement.

The last chapter, 'Prospects and Opportunities' synthesises the major themes and points of the Report and throws light on some of the key issues that emerge The discussion under various heads could be reproduced from the side statements as given.

Progress · Progress towards the six Dakar goals is insufficient. The world is not on tract to achieve EFA.

Planning · The costs of achieving EFA are large, but not beyond the means of most countries.

Costs and Resources : This report estimates the financing gap at up to $5.6 billion

International Cooperation · This report has documented a startling decline in aid over the years 1990-2001, particularly in Sub Saharan Africa, existing but they do not yet appear to be nearly sufficient to match the size of the gaps

Improving the availability and quality of data. The quality of available data covering public spending on education has deteriorated in recent years There is an urgent need to improve the quality and availability of a wider range of international data.

The last section *'Future Monitoring Challenges'*, besides seeking to initiate
a sense of international accountabil
towards commitments that were ma
at the World Education Forum, mak
an attempt to emphasize that EFA nee
to be treated a central education prior
world wide and the challenges of E
are not limited to the developi
countries It preserves the big ho
that the EFA Global monitoring rep
will begin to redress this imbalan
from 2003.

The Report becomes pertinent on t
counts. One – the countries find th
place where and how they move towar
achieving the goals of EFA The nation
governments must give a rethinking
revisiting the planning and strategies
achieve the Goals Second – the ri
source of data generated would provi
scope for educational researchers, poli
planners to delve deep into each the
addressed in the report for future actio
The colourful presentations of the da
and the exemplar notes in boxes ha
made the report impressive and ea
access to information.

R. Meganath